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ABSTRACT

Selected academic and personal characteristics of the Georgia State University Master of Science Degree graduate students in the College of Urban Life were examined. The sample of 759 students active during the period of 1969-78 were studied in terms of: demographic characteristics, undergraduate environment and performance, the environment at Georgia State University, and the students' academic performance in the master's program. It was found that each year's entering class has had an increased proportion of females, a slight downward trend in Graduate Record Examination (GRE) scores, higher undergraduate grade point averages (GPA) as a group, and lower graduate GPAs in general. Performance in core curriculum courses indicated a strong, consistent positive relationship between GRE scores and course final grades. An analysis of minority students' course grades and GRE scores also indicated a positive relationship between grades and scores. Additionally, it appeared that students' aptitude level as measured by GRE scores was often associated with their choice of course instructor. Graphical representations of the findings are included. (SW)

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ED197653

# A DATA ANALYSIS OF STUDENT ACADEMIC PERFORMANCE IN THE MASTER OF SCIENCE IN URBAN LIFE DEGREE PROGRAM, 1969-1978

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Prepared For The College Of
Urban Life
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ABSTRACT

The purpose of this investigation has been to examine selected academic and personal characteristics of the M.S. Degree graduate students in the College of Urban Life. The study population consisted of 759 students active during the time period from 1969 to Summer 1978.

The findings of this research may be summarized as follows:

1) Through the study period, each year's entering class has: a) increased the proportion of females; b) shown a slight downward trend in GRE scores; c) had higher undergraduate GPA's as a group; and d) manifested lower graduate GPA's in general.

2) The students who graduated attended a median of 8 quarters, while inactive and obsolete status students had a median of 3 quarters attendance. Those who were excluded from the program had a median of 2 quarters.

3) As a group, students who failed the core exam had markedly lower GRE scores.

4) Performance in core curriculum courses indicated a strong, consistent positive relationship between GRE scores and course final grades. In general, other U.L. courses showed a similar positive association.

5) An analysis of minority students' course grades and GRE scores also indicated a positive relationship between grades and scores.

6) Graduate courses taken in other GSU colleges showed a generally positive relationship between GRE scores and course grades with a few exceptions.

7) It appears that students' aptitude level as measured by GRE scores was often associated with their choice of course instructor. It was found that in some instances students who had completed a course with a given instructor had a median GRE score substantially higher (or lower) than the students completing the same course with another instructor.

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# A DATA ANALYSIS OF STUDENT ACADEMIC PERFORMANCE IN THE MASTER OF SCIENCE IN URBAN LIFE DEGREE PROGRAM, 1969-1978

The graduate program in the College of Urban Life was established during an era when the initiation of innovative programs at universities throughout the country was at its peak. During the ten years included in this study (1969-1978) the program experienced an evolution in aims, goals and student population. It is reasonable to assume that these evolutionary changes are a reflection of exogenous changes occurring in society in general, as well as certain ideosyncratic factors internal to the program's make up. Through the years, policy changes in the M.S. program have reflected the changing demands of faculty, students and administrators.

The purpose of this analysis is not to delve into, question or otherwise investigate the rationale for the policies of the M.S. program. However, the influence of exogenous and endogenous factors is faithfully mirrored in the data analyzed in this report. While it is not true that "the data speak for themselves," a properly presented data analysis, does allow the informed reader to readily see beyond the patterns, and associations in the data to the policy implications. Because data analysis tends to highlight broad trends, often obscuring important details, it is only a partial picture of the actual situation. This study should be considered as one perspective.

The aim of this study is to supply a statistical report of the M.S. program to the faculty and administrators of the College of Urban Life. A number of salient questions will be addressed. The scope of the study includes the following factors:

1) the demographic characteristics of the M.S. program students, such as age, sex, race, and previous personal history;

2) their undergraduate environment and performance;

3) the students' environment at GSU; and

4) the students' academic performance in the M.S. program.

The diverse backgrounds of students coming to the program and the range of concentrations in the M.S. program itself make it necessary to investigate the background of these students, i.e., where they came from and what kinds of educational experiences they have had. In addition, it is important that a standardized criteria be used in summarizing the performance of such a diverse group. The GRE Aptitude Test provides Verbal and Quantitative standardized scores which allow comparison without trying to equate a variety of disparate backgrounds. It should be clearly noted that the GRE scores are not intended to be measures of the general worth of a given student, but are rather standard measures of a narrow range of academic aptitudes. They do not measure creativity, motivation, success or many other important factors in graduate school performance. These scores are blind to ultimate success outside of graduate school, but they are generally considered to be important predictors of performance in graduate course work. Though research on this matter by ETS has shown mixed results, it is believed that the GRE can be shown to be a reasonably accurate predictor of graduate course work performance. No standard measure claims to be a predictor of successful program completion except to the extent that the lowest scoring students

are more likely to "fail" out of programs. No indication is given of the likelihood of higher scoring students completing the program.

This is an analysis of the population of M.S. students from 1969-1978. No attempt will be made to infer the results to any other population of graduate students. The method of analysis used is that of descriptive statistics, known to be robust and resistant to peculiarities in the data, while at the same time being an efficient measure of the available data.

Data Base

The data for this study were based upon the graduate student admission files and the record of course activities and progress toward program completion. All students who enrolled were included except for a small number in the earliest days of the program whose files had been impractically archived.

## PREVIOUS LITERATURE

The GRE has been used for several decades for selection, placement, and guidance in graduate degree programs. In a review article Thacker and Williams (1974) criticized the GRE as a predictor of graduate success. They indicated that reported correlations between the GRE and criterions of success were either not statistically significant, or were "low enough to raise serious doubts about the validity and the usefulness of the GRE in identifying potential successful graduate students" (p. 940).

The question of selecting a criterion variable has been widely debated in the consideration of academic prediction. Measurements of criterions of success include faculty ratings of students (Robertson and Nielsen, 1961; King and Besco, 1960), performance on comprehensive exams (Law, 1960), and program completion (Lin and Humphreys, 1977; Williams, Harlow, and Gab, 1970). Graduate GPA's have frequently been used as the criterion.

Faculty ratings have been tested as a criterion variable in studies by Robertson and Nielsen (1961) and King and Besco (1960). The former study found no significant correlation between either GRE-Q or GRE-V, and the latter, a significance only between GRE-V and success as predicted by faculty ratings.

Williams, Harlow, and Gab (1970) tested the prognostic value of GRE scores when used with graduation as the criterion of success. The correlation coefficient of this criterion when compared to criteria used in other studies showed the greatest value of any predictor (Thacker and Williams, 1974). On the contrary, Nagi (1975) found that the GRE failed to differentiate those students who completed a doctoral program in Education

from those who did not. Borg (1963) attempted to establish a cut-off GRE-V score, but found that it eliminated more successful candidates than unsuccessful candidates. Law (1960) found correlations between GRE-V and GRE-Q, and the criterion of performance on doctoral comprehensive exams to be significant.

The use of grades as a criterion of success has been widely employed in GRE predictive validity studies. Problems with using grades as the criterion variable include questions of reliability and variability. Typically, the use of grades has implied overall GPA. In some programs, however, as much as 3/4 of all grades have been A's. Results of such variable sets have been short, or restricted range measures (Dole and Baggaley, 1979). On the other hand, the heterogeneous nature of graduate programs suggests a need to disaggregate to the program level, and possibly to the individual course level. Madaus and Walsh (1965) noted that "separation of samples by department yielded higher correlations than did the use of total heterogeneous samples." The work of Goldman and Slaughter (1976) implied that single class grades can be more accurately predicted than overall GPA. Goldman and Slaughter argue that the GPA is often a less reliable indicator of performance than is an individual course grade. This apparent contradiction, that repeated measure increase reliability, is explained in light of the fact that the courses making up the GPA often have differing grading standards. This often results in low correlations among various course grades. Such rationale would support Goldman and Slaughter's findings that individual course grades are more predictable than GPA's. The general form of their arguement is that within course grades are more reliable than between course grades.

Results of tests of the validity of GRE as a predictor using GPA as the criterion of success have proven to be consistent. Thacker and Williams (1974) found correlations between GRE and graduate GPA to be either not significant, or so low that they were inefficient in predictive power. Humphreys and Taber (1973) found GRE's to have their highest and only significant correlation with freshman year grades. Herbert and Holmes (1979) found GRE-Q to be non-predictive, and GRE-V to be potentially predictive of graduate school success defined by GPA. And finally, Camp and Clawson (1979) found a low correlation between GRE-Q and GPA which suggested little predictive value. Correlation of .26 between GRE-V and GPA indicated some "guarded predictive validity." The Graduate Record Examination Board at the Educational Testing Service is currently pursuing a research program on the predictive validity of the GRE across many institutions. The standard criteria will be first year graduate GPA (GRE Board, 1979).

## DEMOGRAPHIC BACKGROUND DATA

The demographic profile of students in the M.S. Program is presented in Tables 1 and 2. The sex and race of entering graduate students for each year included in the study are delineated in Table 1. The total percentage of male entrants is 56%, though in recent years (1976-1978) the majority of enrollees have been females. The proportion of black students enrolling has varied from 8% in 1969 to 52% in 1971; in recent years blacks have comprised approximately one third of the students entering in each year.

The distributions of other characteristics (Table 2) such as undergraduate major, degree, and veteran status, show generally predictable patterns. For example, students receiving veterans' benefits comprise 16% of the total, with 1975 having the highest proportion (22%). It should be noted that GSU had an enrollment peak in the Fall of 1975, during the depth of the 1973-75 depression.

The academic characteristics of the M.S. students are presented in Table 3. The admission status of most students was not available before 1976. For the 1976 to 1978 first year of entry groups, from 57% to 63% had "clear" admit status.

The data on current enrollment status (Table 3) show that 30% of the enrollees graduated. While 72% of the 1969 entrants graduated, only 21% of the 1973 and 44% of the 1974 entrants graduated. It was found that 12% of all entrants were inactive (had not attended for from 1 to 3 quarters prior to the Summer 1979). Those who had not attended for over 3 quarters

were defined as on "obsolete" status and this group of students comprised 24% of the total, ranging from 44% for the 1973 entrants to 21% of the 1969. For the 1970 and 1976 groups, 14% had been excluded. None of the 1969 entrants were excluded while 2% of the 1972 and 1973 entrants were excluded.

The core exam performance distribution by year of entry shows that 79% of the 1969 group passed, compared to 33% in 1973 and 27% for 1975. Fifty-seven percent of all entrants had never attempted the core exam.

The distribution of areas of concentration is given in Table 3 also. Criminal Justice is 25% of the total, but has in the 1974 to 1978 period, been over 25% of the yearly total. Urban Government Administration was as high as 52% in 1972, but dropped to 5% in 1978, undoubtedly due to the establishment of the M.G.A. degree.

The fluid nature of the M.S. student body is readily shown by the distribution of re-entries. For the entry years of 1969 to 1973 over 25% of each group had re-entered by the Summer 1978.

TABLE 1

Distribution of M.S. Graduate Students by Year of First Enrollment by Sex and Minority Status

| Variable | % 1969 | % 1970 | % 1971 | % 1972 | % 1973 | % 1974 | % 1975 | % 1976 | % 1977 | % 1978 | % Total | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sex | | | | | | | | | | | | |
| Male | 57 | 64 | 64 | 67 | 56 | 60 | 54 | 44 | 45 | 43 | 56 | 424 |
| Female | 43 | 36 | 36 | 33 | 44 | 40 | 46 | 56 | 55 | 57 | 44 | 335 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |
| Race | | | | | | | | | | | | |
| Black | 8 | 34 | 52 | 45 | 22 | 37 | 30 | 30 | 34 | 29 | 35 | 263 |
| White | 92 | 66 | 48 | 55 | 78 | 63 | 70 | 70 | 66 | 71 | 65 | 483 |
| Total N | 12 | 59 | 92 | 96 | 60 | 100 | 105 | 91 | 96 | 35 | 100 | 746 |

# Demographic Characteristics for First Year Enrollment

| Variable | % 1969 | % 1970 | % 1971 | % 1972 | % 1973 | % 1974 | % 1975 | % 1976 | % 1977 | % 1978 | % Total | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Grad. Deg. | | | | | | | | | | | | |
| 1 | 0 | 13 | 7 | 8 | 7 | 6 | 9 | 3 | 5 | 6 | 7 | 53 |
| 2 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 6 | 1 | 7 |
| None | 100 | 87 | 93 | 92 | 93 | 93 | 88 | 97 | 94 | 88 | 92 | 699 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |
| Undergrad. Major | | | | | | | | | | | | |
| Criminal Justice | 0 | 2 | 4 | 4 | 4 | 12 | 12 | 8 | 10 | 13 | 8 | 46 |
| Economics | 0 | 4 | 6 | 1 | 2 | 6 | 2 | 3 | 4 | 0 | 3 | 20 |
| Education, Elem. | 0 | 0 | 8 | 1 | 0 | 3 | 1 | 1 | 4 | 0 | 2 | 14 |
| Education, Sec. | 7 | 0 | 4 | 4 | 7 | 3 | 6 | 1 | 4 | 6 | 4 | 23 |
| Political Science | 7 | 11 | 18 | 10 | 13 | 13 | 20 | 12 | 18 | 9 | 15 | 86 |
| Psychology | 14 | 4 | 6 | 10 | 11 | 10 | 13 | 18 | 8 | 13 | 10 | 62 |
| Physical Science | 0 | 15 | 1 | 7 | 0 | 1 | 0 | 5 | 3 | 3 | 3 | 20 |
| History | 22 | 11 | 6 | 15 | 9 | 12 | 13 | 11 | 8 | 9 | 11 | 65 |
| Math Science | 0 | 4 | 0 | 3 | 2 | 1 | 0 | 0 | 1 | 3 | 1 | 8 |
| Fine Arts | 0 | 8 | 1 | 1 | 0 | 1 | 0 | 3 | 4 | 0 | 2 | 12 |
| Business | 14 | 11 | 7 | 8 | 13 | 4 | 6 | 5 | 1 | 6 | 6 | 38 |
| Engineering | 0 | 4 | 1 | 1 | 2 | 3 | 2 | 1 | 0 | 0 | 2 | 10 |
| Geography | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 1 | 6 |
| Anthropology | 7 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 5 | 3 | 2 | 10 |
| Social Work | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 |
| Management | 0 | 0 | 4 | 5 | 0 | 4 | 0 | 0 | 2 | 3 | 2 | 13 |
| Sociology | 29 | 13 | 28 | 25 | 22 | 26 | 19 | 21 | 20 | 22 | 22 | 134 |
| Urban Studies | 0 | 11 | 6 | 4 | 11 | 1 | 5 | 6 | 6 | 7 | 6 | 33 |
| Total N | 14 | 47 | 72 | 79 | 46 | 81 | 85 | 67 | 79 | 32 | 100 | 602 |
| Yr. Completed Undergrad. Degree | | | | | | | | | | | | |
| 1977-1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 17 | 2 | 15 |
| 1971-1976 | 0 | 0 | 28 | 40 | 49 | 74 | 72 | 74 | 70 | 46 | 52 | 395 |
| 1966-1970 | 50 | 61 | 46 | 43 | 29 | 20 | 15 | 12 | 16 | 20 | 29 | 218 |
| 1961-1965 | 36 | 19 | 15 | 12 | 15 | 1 | 7 | 9 | 2 | 11 | 10 | 74 |
| 1956-1960 | 7 | 11 | 5 | 3 | 7 | 3 | 5 | 1 | 0 | 3 | 4 | 30 |
| 1951-1955 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 3 | 1 | 3 | 1 | 9 |
| 1950 or earlier | 7 | 6 | 6 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 2 | 17 |
| Total N | 14 | 63 | 95 | 96 | 60 | 101 | 105 | 91 | 98 | 35 | 100 | 758 |

TABLE 2 (CON'T)

| Variable | % 1969 | % 1970 | % 1971 | % 1972 | % 1973 | % 1974 | % 1975 | % 1976 | % 1977 | % 1978 | % Total | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Highest Degree | | | | | | | | | | | | |
| B.S., A.B., or B.A. | 100 | 89 | 94 | 93 | 95 | 93 | 87 | 97 | 94 | 89 | 93 | 703 |
| M.S., or M.A. | 0 | 11 | 5 | 5 | 5 | 5 | 5 | 3 | 1 | 0 | 4 | 34 |
| J.D. | 0 | 0 | 0 | 2 | 0 | 1 | 4 | 0 | 3 | 8 | 2 | 13 |
| Ed.D., DPA, Ph.D. | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 1 | 3 | 1 | 7 |
| Other | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |
| Full-time Prof. Exp. | | | | | | | | | | | | |
| public, federal | 0 | 1 | 6 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 9 |
| public, state | 23 | 12 | 10 | 6 | 2 | 2 | 4 | 0 | 0 | 0 | 4 | 31 |
| public, regional | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| public, city | 8 | 8 | 6 | 7 | 4 | 3 | 0 | 0 | 0 | 0 | 3 | 22 |
| public, town | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| public, county | 0 | 3 | 4 | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 2 | 11 |
| private | 8 | 8 | 8 | 9 | 4 | 3 | 0 | 0 | 0 | 0 | 3 | 22 |
| not applicable | 61 | 70 | 66 | 76 | 84 | 90 | 94 | 100 | 100 | 100 | 87 | 629 |
| Total N | 13 | 61 | 89 | 84 | 54 | 97 | 105 | 91 | 98 | 35 | 100 | 727 |
| VA Benefits | | | | | | | | | | | | |
| Yes | 0 | 10 | 21 | 9 | 17 | 16 | 22 | 10 | 11 | 17 | 16 | 119 |
| No | 100 | 90 | 79 | 81 | 83 | 83 | 77 | 90 | 89 | 83 | 84 | 635 |
| Unknown | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| Total N | 14 | 62 | 95 | 95 | 60 | 101 | 105 | 91 | 98 | 35 | 100 | 756 |
| Academic Honors | | | | | | | | | | | | |
| Yes | 0 | 2 | 0 | 3 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 10 |
| No | 71 | 54 | 54 | 46 | 20 | 45 | 22 | 6 | 0 | 0 | 30 | 224 |
| Not Applicable | 29 | 44 | 46 | 51 | 79 | 53 | 76 | 93 | 100 | 100 | 69 | 525 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |
| Undergrad. Colleges | | | | | | | | | | | | |
| 1 | 50 | 64 | 73 | 67 | 51 | 59 | 59 | 58 | 55 | 57 | 61 | 460 |
| 2 | 43 | 26 | 19 | 22 | 34 | 31 | 27 | 24 | 34 | 31 | 27 | 207 |
| 3 | 7 | 5 | 7 | 9 | 7 | 9 | 8 | 16 | 10 | 3 | 9 | 67 |
| 4 or more | 0 | 5 | 1 | 2 | 8 | 1 | 6 | 2 | 1 | 9 | 3 | 24 |
| Total N | 14 | 62 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 758 |

# Academic Characteristics for Performance in the M.S. in Urban Life Program

| Variable | % 1969 | % 1970 | % 1971 | % 1972 | % 1973 | % 1974 | % 1975 | % 1976 | % 1977 | % 1978 | % Total | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Admissions Status** | | | | | | | | | | | | |
| Clear | 0 | 6 | 5 | 6 | 15 | 40 | 47 | 63 | 59 | 57 | 33 | 248 |
| Restricted | 0 | 0 | 0 | 0 | 10 | 36 | 42 | 35 | 41 | 43 | 23 | 174 |
| Not Applicable | 100 | 94 | 95 | 94 | 75 | 24 | 11 | 2 | 0 | 0 | 44 | 336 |
| Total N | 14 | 63 | 95 | 96 | 60 | 101 | 105 | 91 | 98 | 35 | 100 | 758 |
| **Current Status as of Summer 1978** | | | | | | | | | | | | |
| Active | 7 | 6 | 4 | 8 | 8 | 6 | 17 | 45 | 78 | 94 | 25 | 196 |
| Inactive(out 3 qtrs) | 0 | 0 | 0 | 11 | 25 | 14 | 21 | 19 | 13 | 0 | 12 | 91 |
| Excluded | 0 | 14 | 13 | 2 | 2 | 6 | 12 | 14 | 2 | 0 | 8 | 58 |
| Obsolete | 21 | 26 | 29 | 31 | 44 | 27 | 25 | 15 | 7 | 3 | 24 | 179 |
| Graduate | 72 | 54 | 53 | 48 | 21 | 44 | 22 | 7 | 0 | 0 | 30 | 227 |
| Post-graduate(grad) | 0 | 0 | 1 | 0 | 0 | 3 | 3 | 0 | 0 | 3 | 1 | 8 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |
| **Results Core Exam** | | | | | | | | | | | | |
| Passed, 1st time | 79 | 54 | 48 | 54 | 33 | 51 | 27 | 17 | 9 | 0 | 35 | 269 |
| Passed, 2nd time | 7 | 6 | 8 | 3 | 0 | 5 | 3 | 1 | 0 | 0 | 3 | 24 |
| Passed, 3rd time | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 3 |
| Failed, 1st time | 0 | 2 | 5 | 4 | 5 | 0 | 3 | 2 | 1 | 0 | 3 | 19 |
| Failed, 2nd time | 0 | 0 | 3 | 0 | 0 | 1 | 6 | 3 | 0 | 0 | 2 | 13 |
| Failed, 3rd time | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Not Yet Taken | 14 | 38 | 36 | 39 | 62 | 41 | 60 | 76 | 90 | 100 | 57 | 429 |
| Total N | 14 | 63 | 95 | 96 | 60 | 101 | 105 | 91 | 98 | 35 | 100 | 758 |
| **Concentration** | | | | | | | | | | | | |
| Criminal Justice | 21 | 13 | 13 | 18 | 25 | 29 | 33 | 27 | 33 | 37 | 25 | 191 |
| Community Dvlpment | 21 | 13 | 8 | 14 | 17 | 19 | 12 | 16 | 21 | 9 | 15 | 113 |
| Human Resources | 29 | 19 | 26 | 12 | 10 | 14 | 8 | 18 | 14 | 9 | 15 | 113 |
| Urban Gov't Admn. | 29 | 41 | 45 | 52 | 28 | 27 | 24 | 19 | 14 | 5 | 30 | 225 |
| Urban Studies | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 5 | 14 | 2 | 14 |
| Undecided | 0 | 13 | 8 | 4 | 20 | 10 | 23 | 18 | 12 | 26 | 13 | 102 |
| Total N | 14 | 63 | 95 | 96 | 60 | 101 | 105 | 91 | 98 | 35 | 100 | 758 |
| **Re-Entries** | | | | | | | | | | | | |
| 1 | 43 | 28 | 28 | 30 | 24 | 13 | 7 | 1 | 0 | 0 | 15 | 116 |
| 2 | 0 | 8 | 10 | 7 | 7 | 4 | 1 | 0 | 0 | 0 | 4 | 29 |
| 3 | 7 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Never Re-entered | 50 | 60 | 59 | 63 | 69 | 83 | 92 | 99 | 100 | 100 | 80 | 607 |
| Total N | 14 | 63 | 95 | 96 | 61 | 101 | 105 | 91 | 98 | 35 | 100 | 759 |

## GRAPHICAL DISPLAYS OF STUDENT PROFILE DATA

The distributions of interval variables, such as age, GPA and GRE scores, are presented by a graphic technique called "box and whisker" plots (Tukey, 1977; McGill, Tukey and Larsen, 1978). These plots reveal at a glance how variables such as age and GPA have changed through the years of the study. Each box and whisker plot consists of a box with two lines extending from it (Figure 1-1). The two "whiskers" identify the extremes of the distribution, for example, those students who are youngest and oldest. The box identifies the range of those individuals with intermediate ages (specifically, 50% of the students distributed around the median are included in the box). A box and whisker plot, then, shows the range around the median, and the distributional extremes. The distributions of age (Figure 1-1) at year of first entry show that median age jumps eratically from year to year, depicting no clear pattern.

The distributions of undergraduate college GPA's by entry year (Figure 1-2) show a general upward increase in median GPA. This trend corresponds to the widespread phenomena of "grade inflation" said to have taken place since the late 1960's. Whether grade inflation is a product of "easier" grading or of students selecting curricula with more lenient grades is still in question. It is known that a sweeping change in curricula did take place in the 1960's and 1970's, and that since that time more programs have required fewer courses and offered more electives (Blackburn, et al, 1976). Students' response to this change was to take courses in fewer disciplines and more courses in their areas of concentration. Students usually make higher grades in their major than in non-major courses. Also,

newer disciplines typically have higher grading patterns than traditional disciplines.

The comparison of quarters attended by the Summer of 1978 with year of first entry is given in Figure 1-3. The median of quarters attended for the entire study population is 5. For all years of entry, 75% of the students attended 10 or fewer quarters. This is indicative of the part-time status of almost all M.S. Urban Life students.

The graduate GPA's of the M.S. students are related to year of first entry in Figure 1-4. The median GPA has decreased slightly during the 1969-1978 period, with the exception of the 1973 entrants. This trend might be the result of numerous factors. The M.S. program is highly structured with a specific core sequence of courses and few electives. This downward trend could be a product of, for instance, more stringent grading, less well prepared students or lower levels of motivation. For all but the 1969 group, 25% or more of the years entrants had GPA's of 3.0 or less. Furthermore, for the 1976 entering group, 50% had GPA's of 3.0 or less as of Summer 1978.

The relationship of quarters attended to current status is shown in Figure 1-5. The median number of quarters attended by active students (as of Summer 1978) was 4, with 75% having attended 6 or fewer quarters. The median for inactive students was 3 quarters, as was the median for obsolete students. Excluded students had a median of 2 quarters of attendance. Students who have graduated typically attended 9 quarters or less (with a range from 4 quarters to 17 quarters). The overall median of attendance in the program was 5 quarters.

FIGURE 1-1
Distribution of Age at Admission by Year Entered Graduate Program

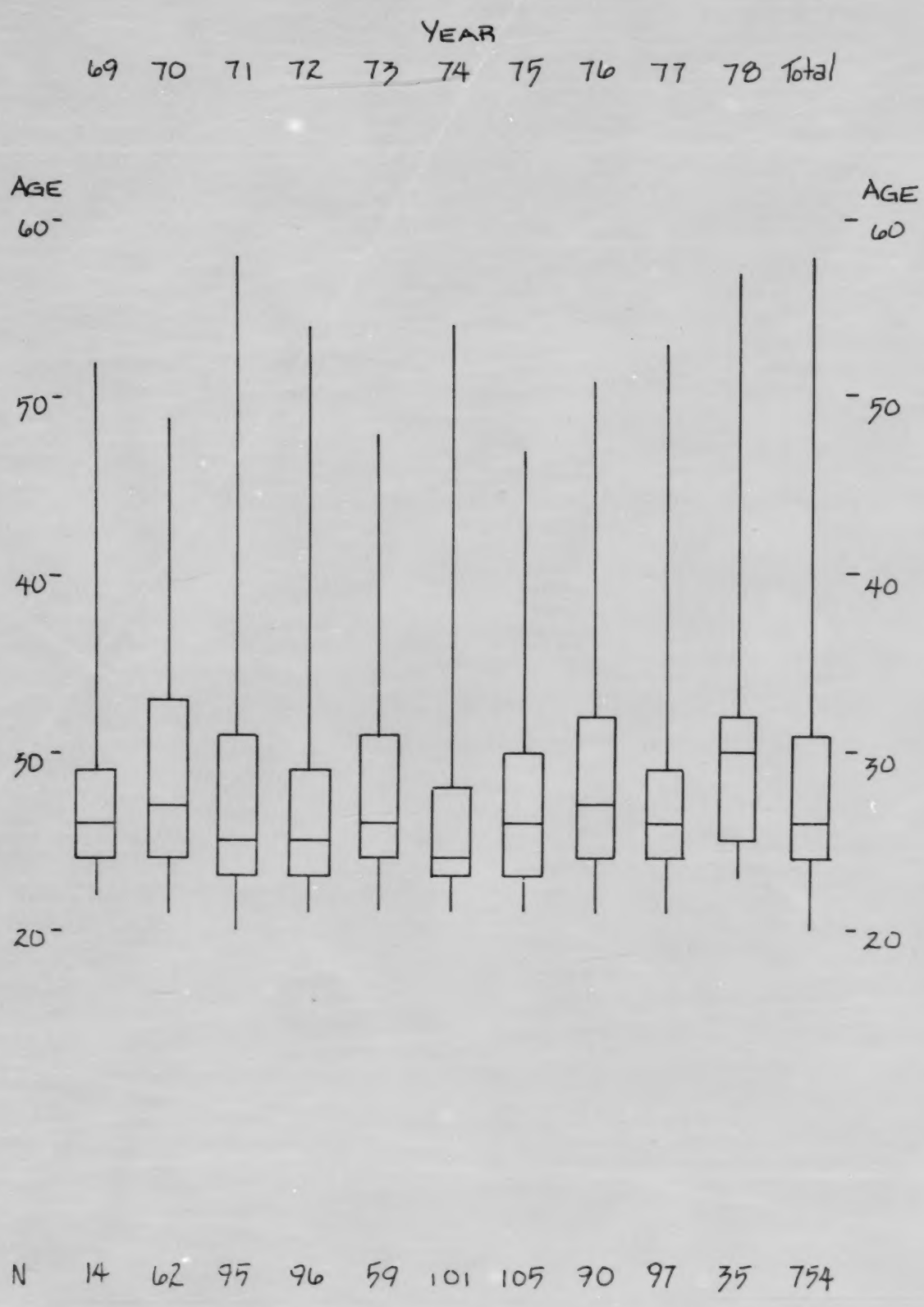


FIGURE 1-2
Distribution of Undergraduate GPA by Year Entered Graduate Program

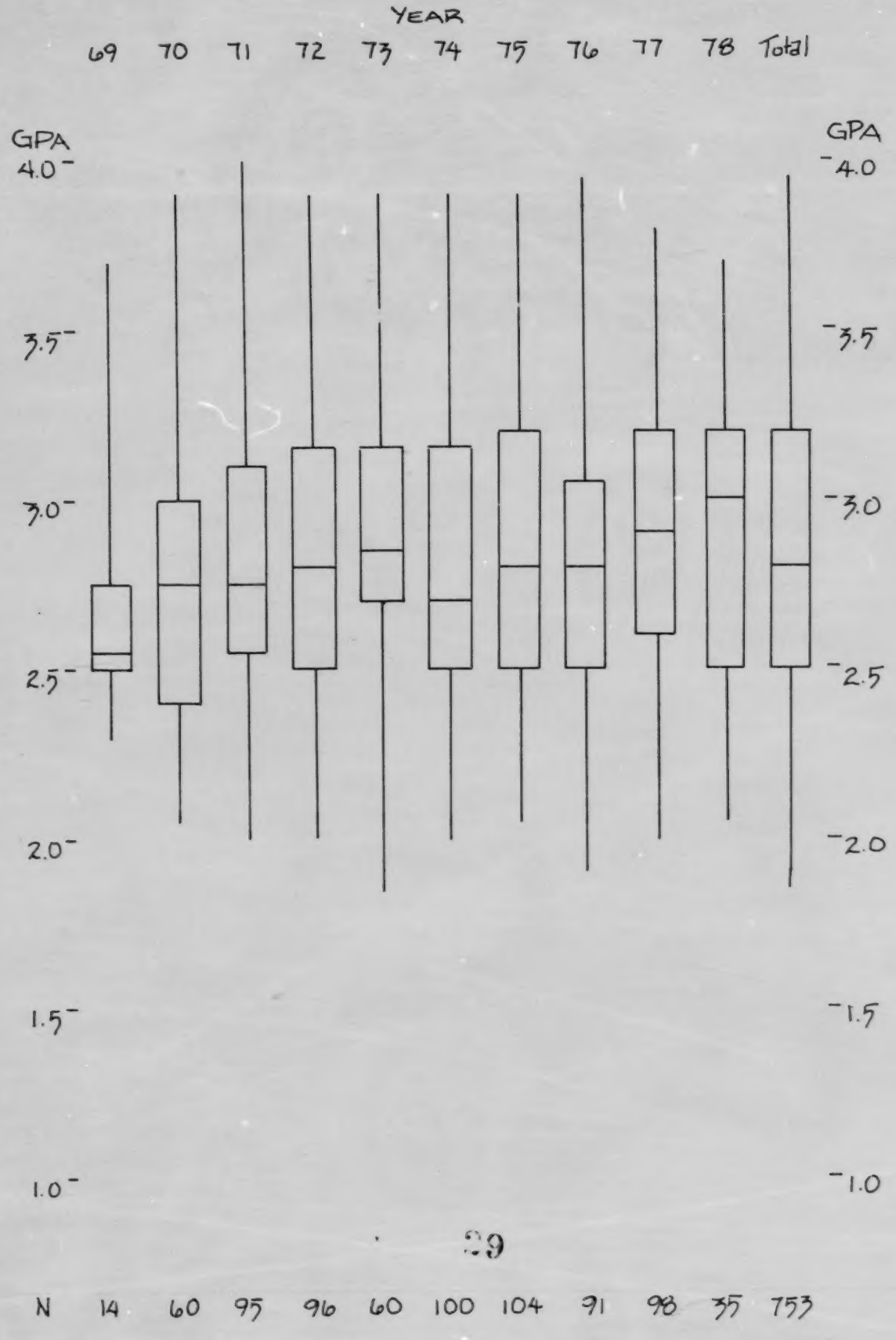


FIGURE 1-3
Distribution of Quarters Attended by Year Entered Graduate Program

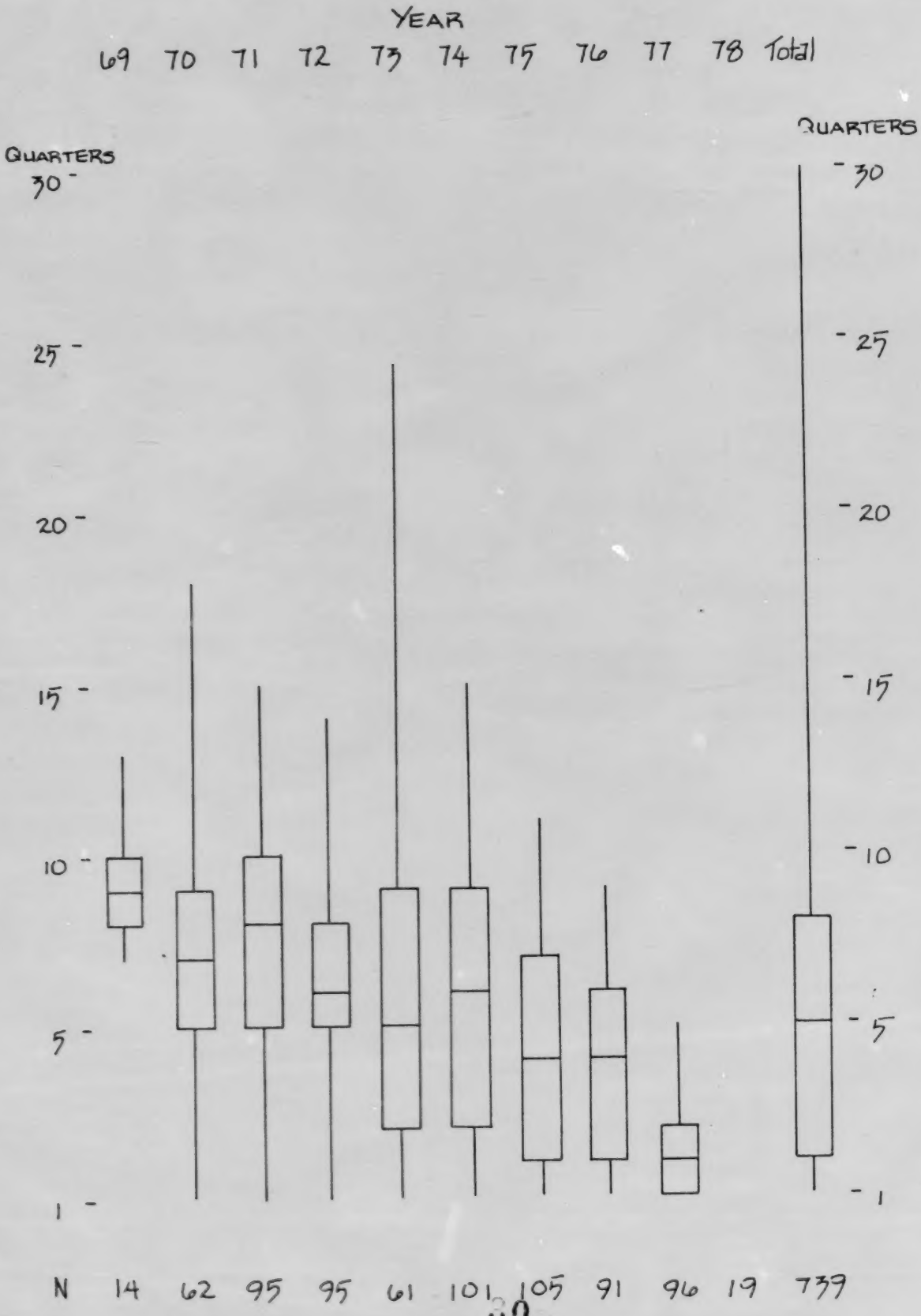


FIGURE 1-4
Distribution of Final or Most Recent Graduate GPA by Year Entered Graduate Program

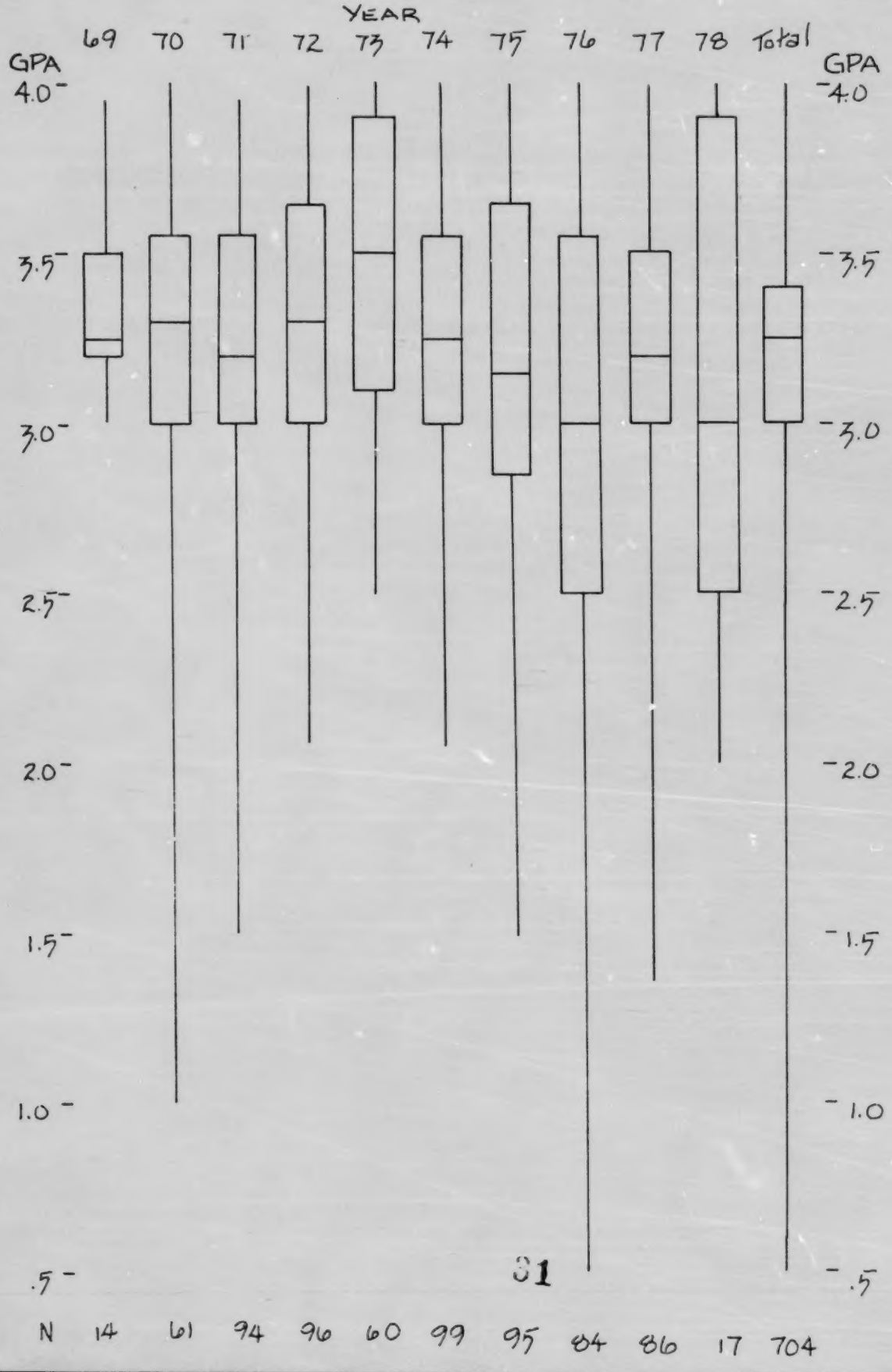
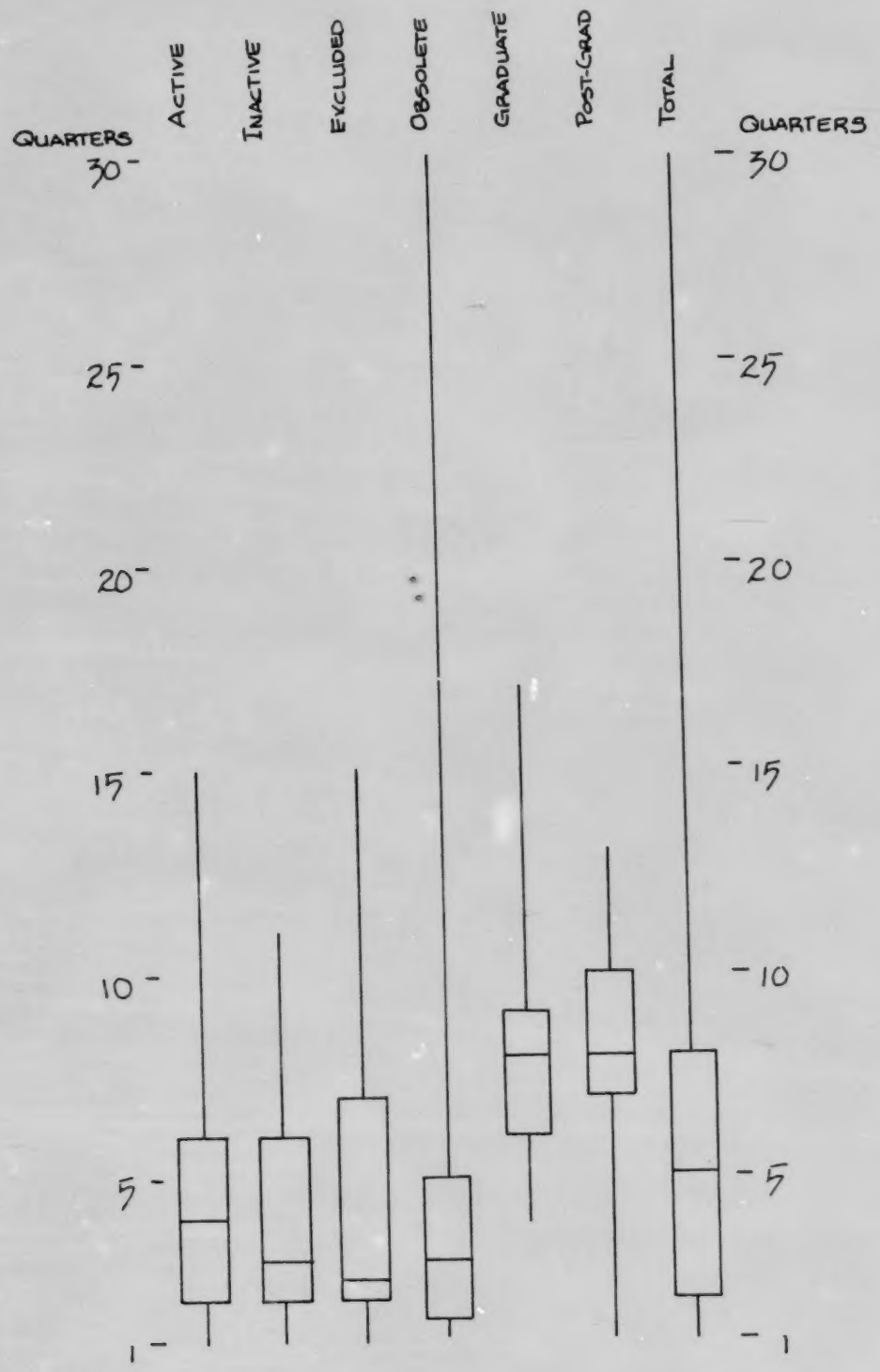


FIGURE 1-5
Distribution of Accumulated Quarters in the M.S. in Urban Life Graduate Program by Current Status



## RELATIONSHIP OF GRE SCORES WITH STUDENT DEMOGRAPHIC AND ACADEMIC ATTRIBUTES

As previously noted GRE scores are not intended to signify any behavior potential except that of course performance. GRE scores should not be misconstrued as being measures of personality, creativity, motivation or success in mainstream life activities. GRE scores have been shown to be a good predictor of the probability of failure in course work, but not necessarily a highly accurate predictor of completion of graduate programs. Given the nature of the GRE as a standard measure, it does presents a "yardstick" for students in the program that has widespread recognition and allows comparison across programs. Although generally considered to be a superior measure of student potential than the GRE, a student's performance as an undergraduate is difficult to use as a predictor because of the impossibility of equating one undergraduate program with another on either a qualitative or quantitative basis. Keeping in mind these caveats, the following data analysis is meant for the purpose of guaging course performance only.

Overall graduate GPA have not been shown in previous research in graduate level programs to be a consistent enough criterion of success to allow prediction from such indicators as GRE's and undergraduate record. However, there is some evidence to support the rationale that individual course grades are more predictable than overall averages due to the presence of widely differing grading standards. In the following sections of this report, the emphasis will be upon exploring indicators of individual course performance. By concentrating on individual courses both cross-course comparisons may be pursued, and possible factors that influence within course performance may be investigated.

The distribution of GRE Verbal and Quantitative Scores by sex are presented in Figure 2-1, which also shows the score distribution for non-minorities. Males in general tend to score lower than females on the GRE verbal, while females as a group score lower than males on the Quantitative portion. This pattern is similar to that of the general graduate school population.

The reliability and validity of the GRE has been seriously questioned as it applies to minority students. It is often argued that the exam is culturally biased against minority students. Although, it is not within the mandate or scope of this report to investigate this important issue, it is appropriate within the context of this report to analyze minorities separately to determine if the GRE is an indicator of course level performance for the minorities as a group in the M.S. program. The graph shown in Figure 2-2 is the distribution of GRE scores for minorities by sex. It should be noted that no sex differences are readily apparent for minorities as was found for non-minorities.

The relationship between age at time of entry into the M.S. program and GRE Verbal scores are shown in Figure 2-3 and with GRE Quantitative in Figure 2-4. The general trend is that as age increases, the median GRE increases with downward trend past the mid-thirties level. The trend has many inconsistencies, with those who were 38 at time of entry having the second highest median. The older age groups have fewer very low or very high scores also. The Quantitative scores with age in Figure 2-4 show a more marked peak in late 20's and early 30's, with a consistent decline after mid-thirties. Here again, note the 45 year old group had a median

second only to 34 year olds. It is generally held that Quantitative scores are closely related to mathematical achievement level as well as inherent aptitude.

The distributions of GRE Verbal scores by undergraduate institutions are shown in Figure 2-7 where a minimum of 5 were graduated from each institution. The highest median Verbal scores were for graduates of Emory, Georgia Tech and the University of Georgia. GSU median was middle range compared to the other institutions. Figure 2-8 shows that the highest median for GRE-Q is found for Kentucky University and Georgia Tech.

GRE scores for students working in full-time professional jobs are found in Figure 2-9 (Verbal) and Figure 2-10 (Quantitative). No clear patterns or trends are shown for the variable of years of professional work experience.

GRE scores related to area of M.S. program concentration are given in Figure 2-12. The highest median for Verbal scores is for the Urban Studies concentration, while for Quantitative scores the highest median is for Community Development. This is most likely an artifact of the sexual distribution for these fields.

Figure 2-5 gives the GRE Verbal scores by year of entrance. This graph shows that 1969 and 1973 entrants had the highest median with other years being generally equal. The Quantitative scores with year of entrance are found in Figure 2-6 and show the entrants of 1971 to have the lowest median.

The core exam results as they relate to GRE's are given in Figure 2-13. Clearly, those who fail the core have generally lower scores on the GRE. This is especially true for those who have not passed it at all.

The current status of the students is related to GRE's for those who have been excluded. The active, inactive, obsolete and graduated categories have about the same medians.

FIGURE 2-1
Distribution of GRE Verbal and Quantitative Scores by Sex and Minority Status

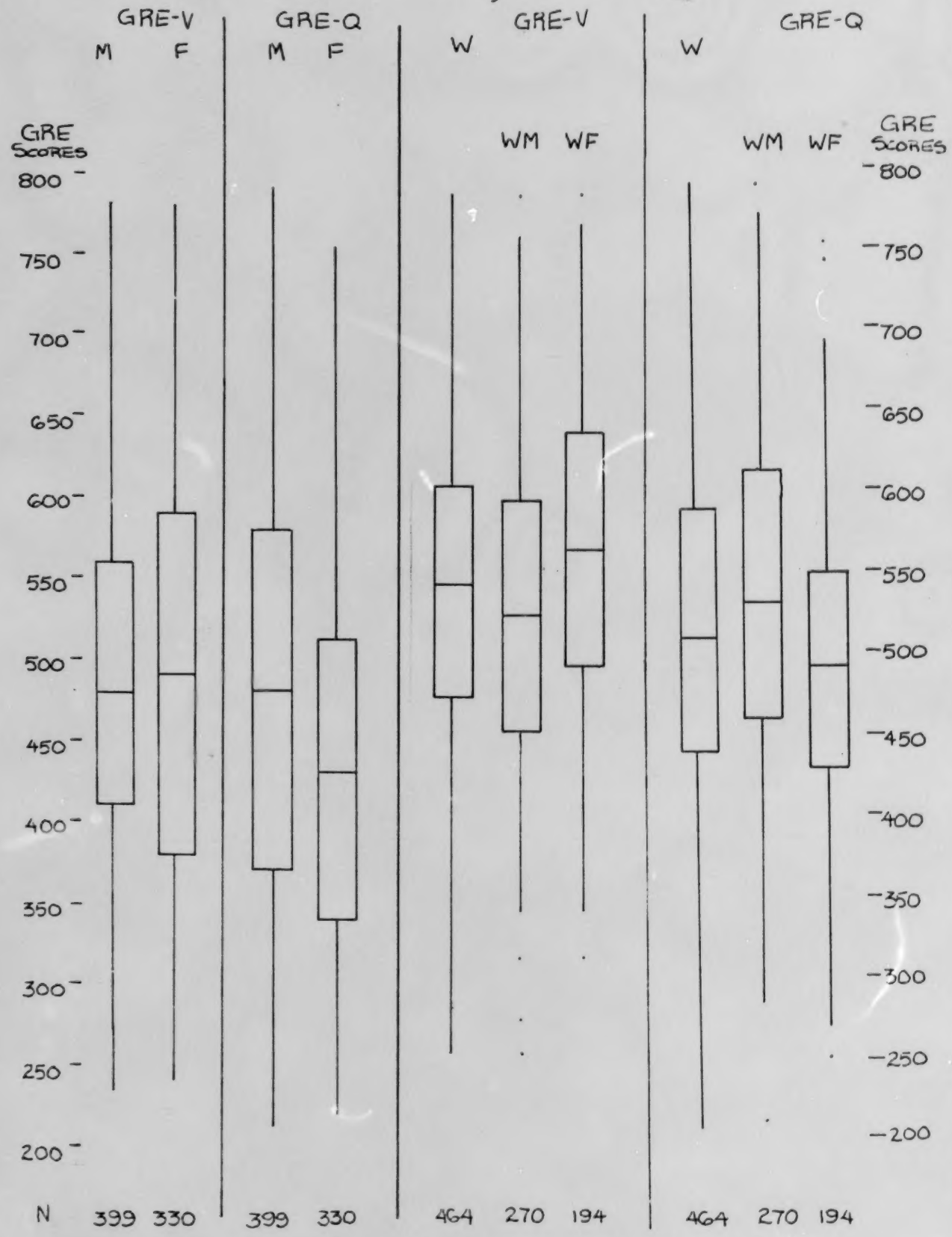


FIGURE 2-2
Distribution of GRE Verbal and Quantitative Scores for Minority Students by Sex

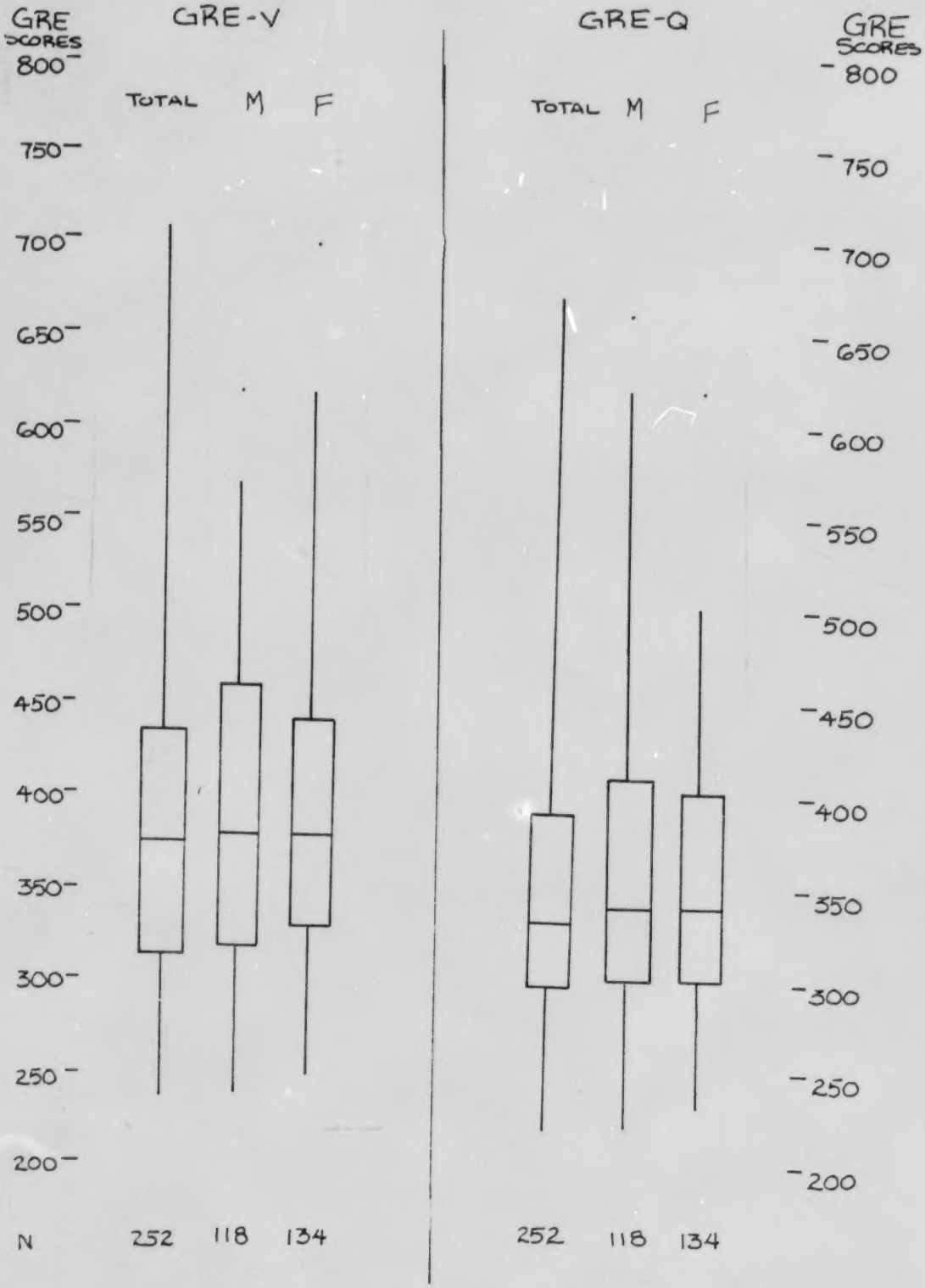
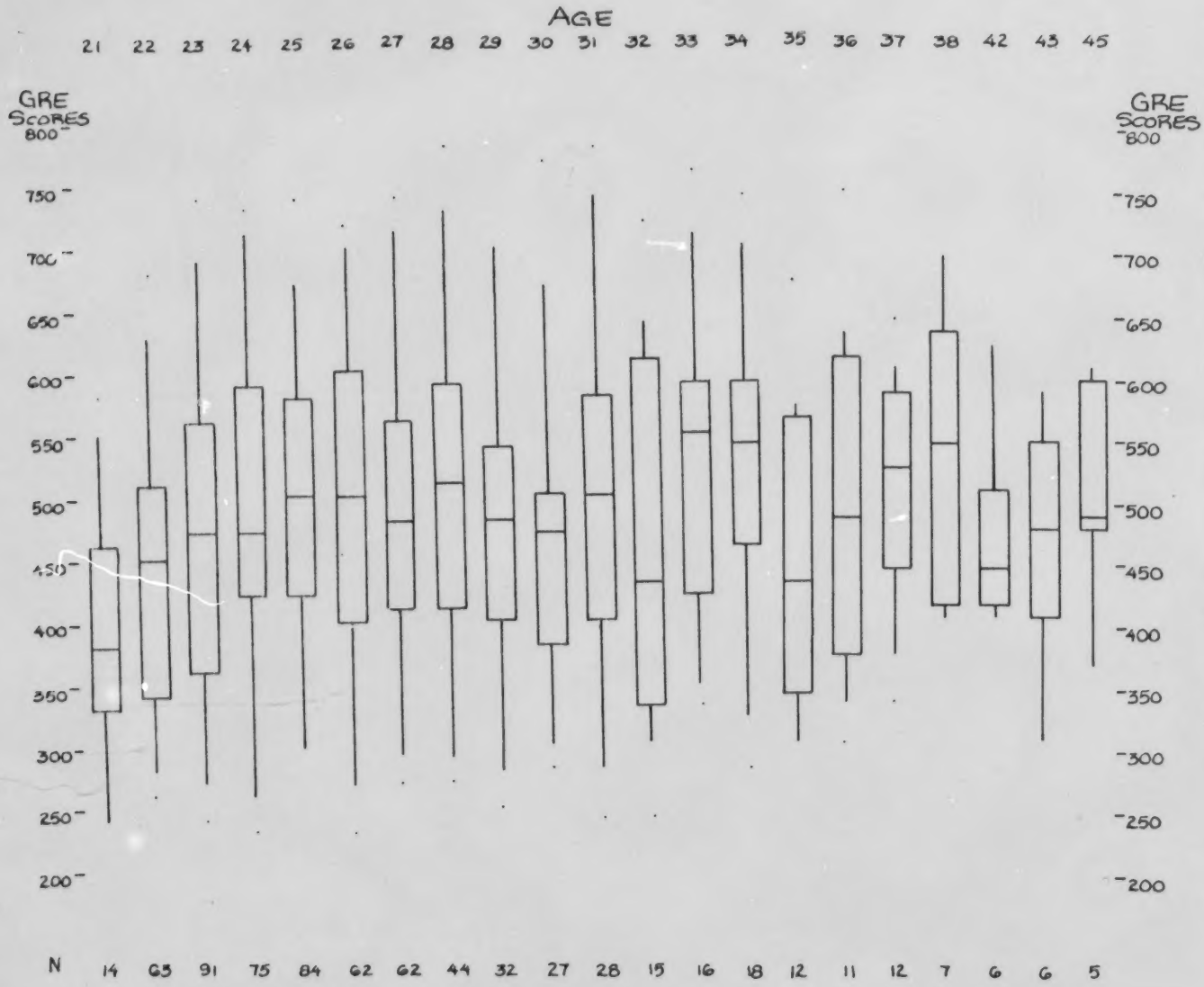


FIGURE 2-3

Distribution of GRE Verbal Scores by Age at Admission*




* Only those age categories with 5 or more students are shown.

FIGURE 2-4

Distribution of GRE Quantitative Scores by Age at Admission

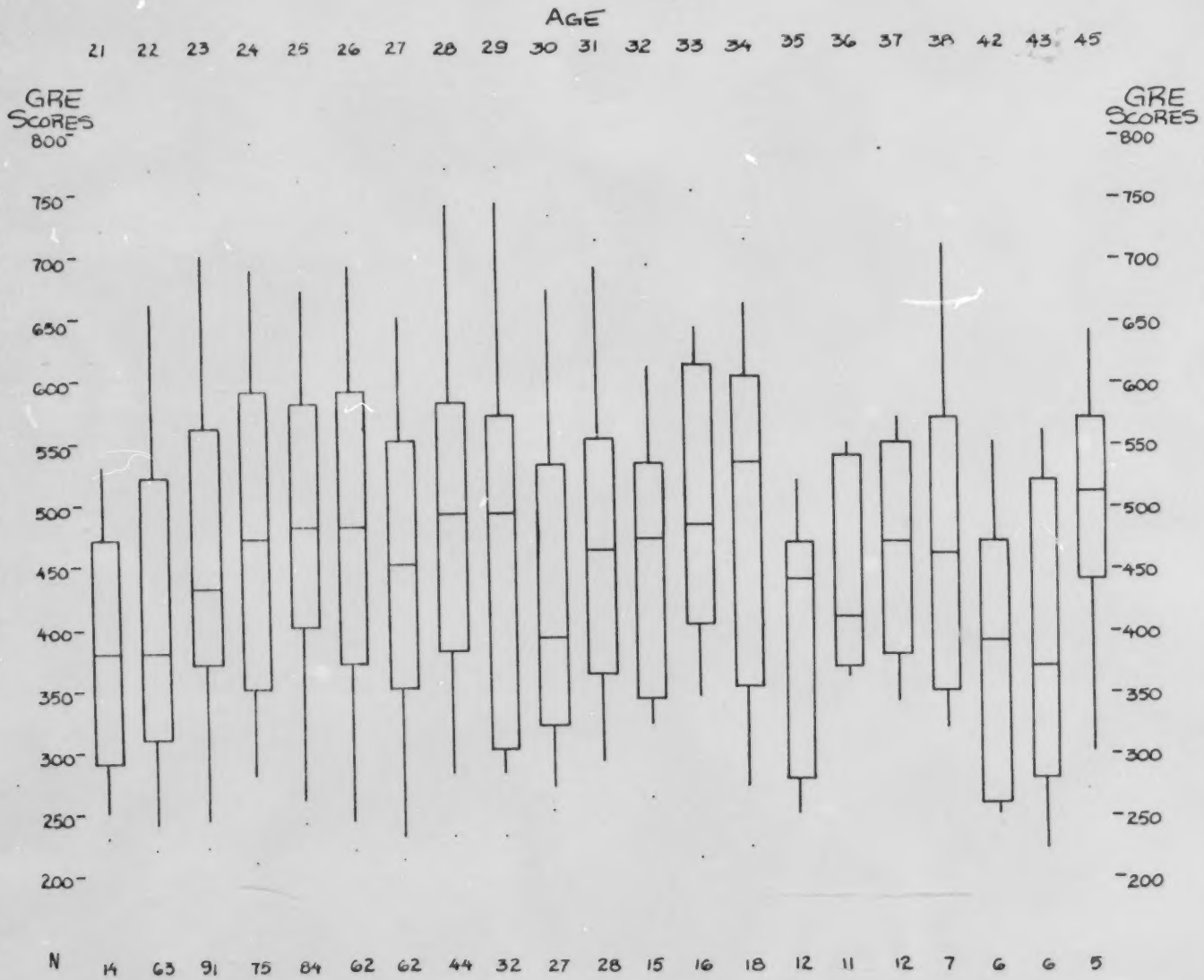


FIGURE 2-5

Distribution of GRE Verbal Scores by Year of GSU Graduate Admission

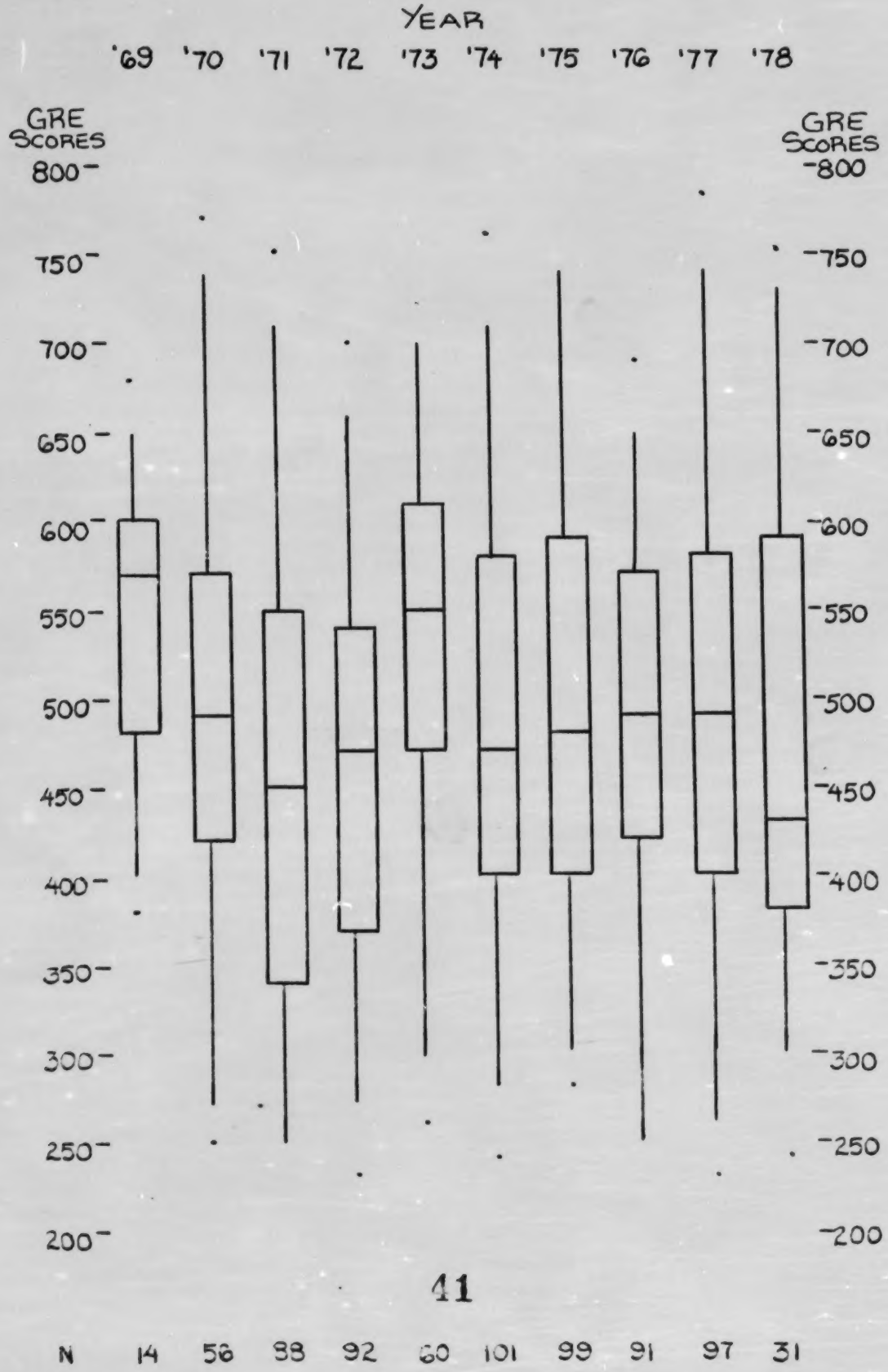


FIGURE 2-6

Distribution of GRE Quantitative Scores by Year of GSU Graduate Admission

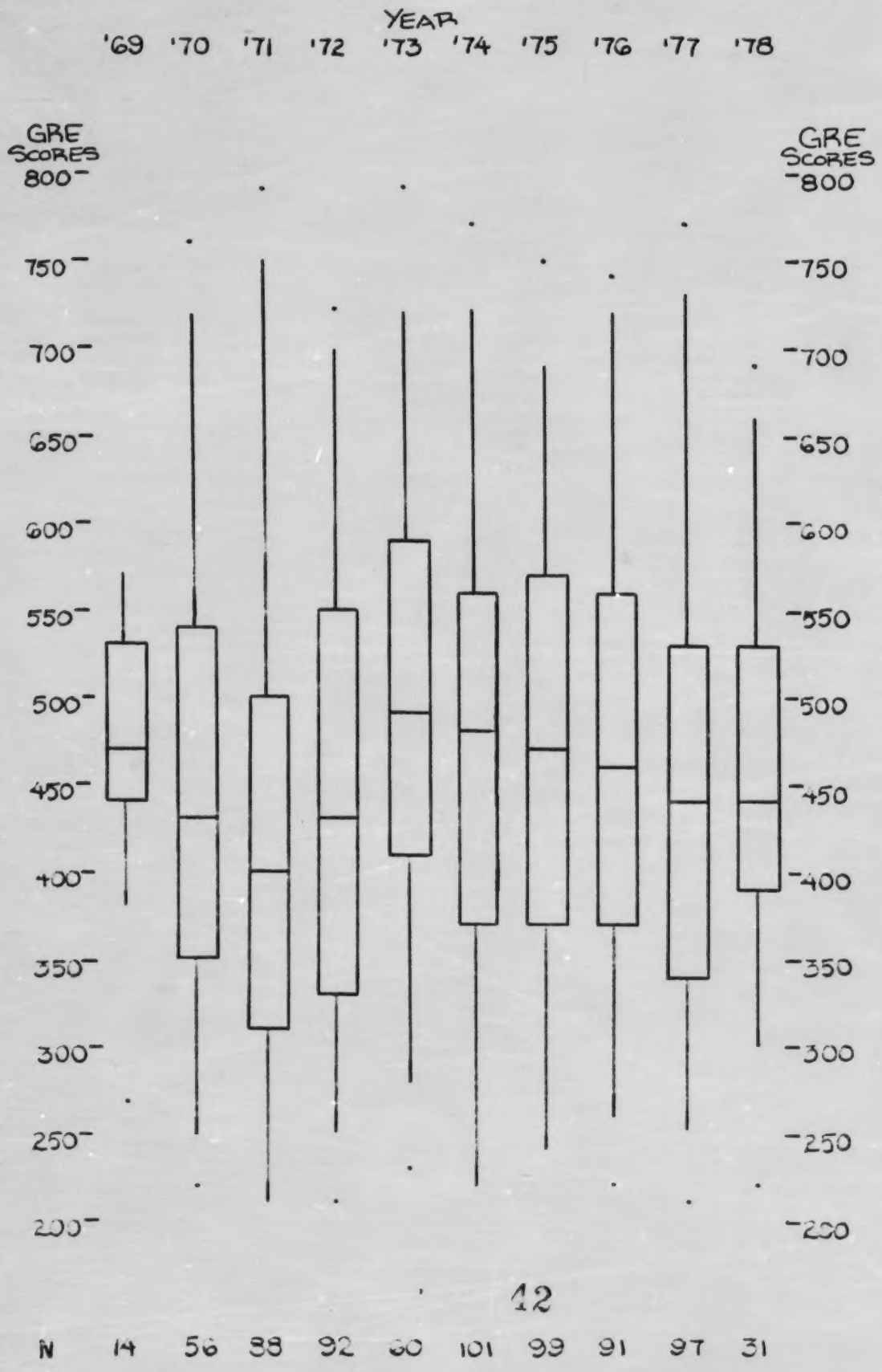


FIGURE 2-7

# Distribution of GRE Verbal Scores by Undergraduate College or University

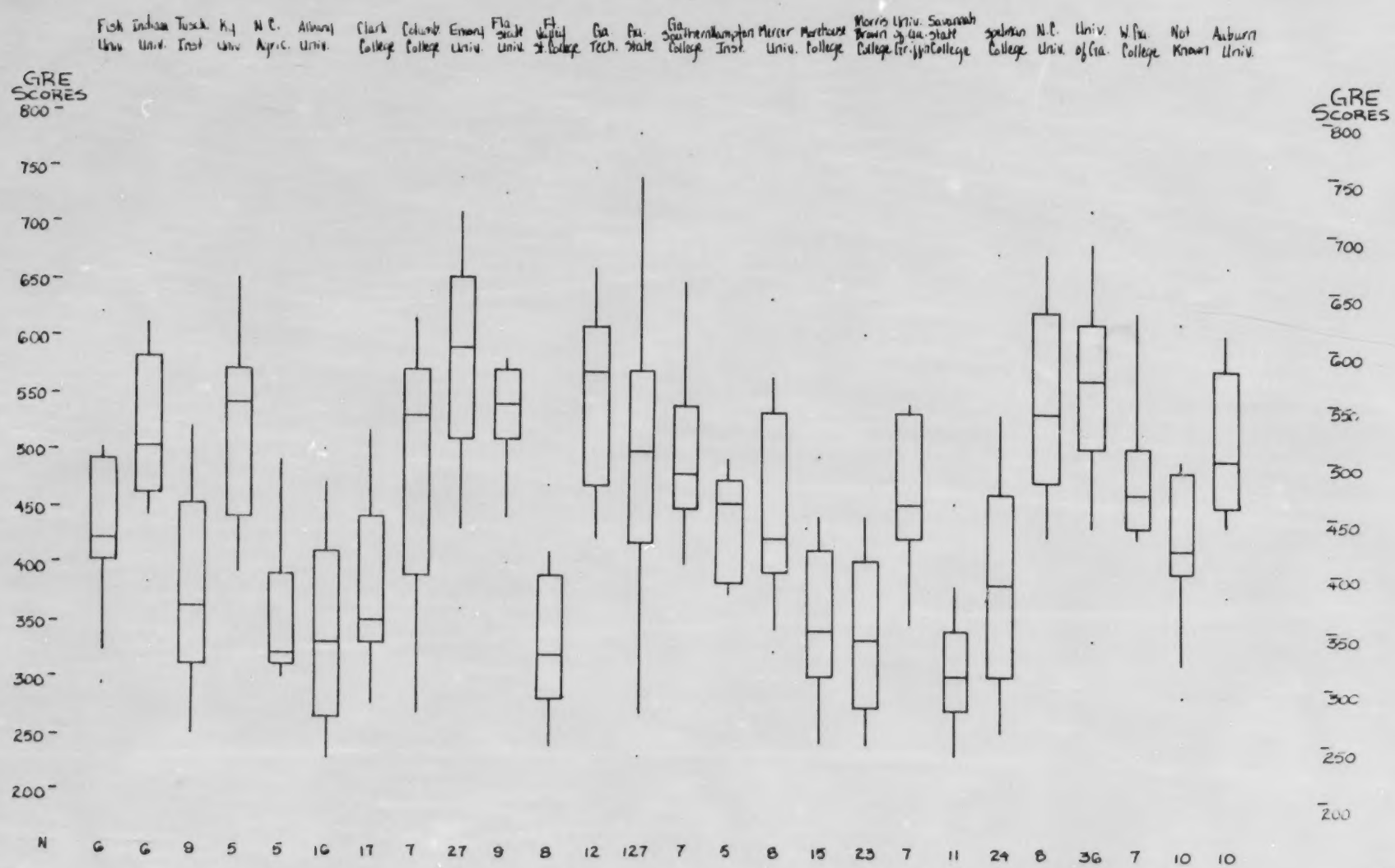


FIGURE 2-8

# Distribution of GRE Quantitative Scores by Undergraduate College or University

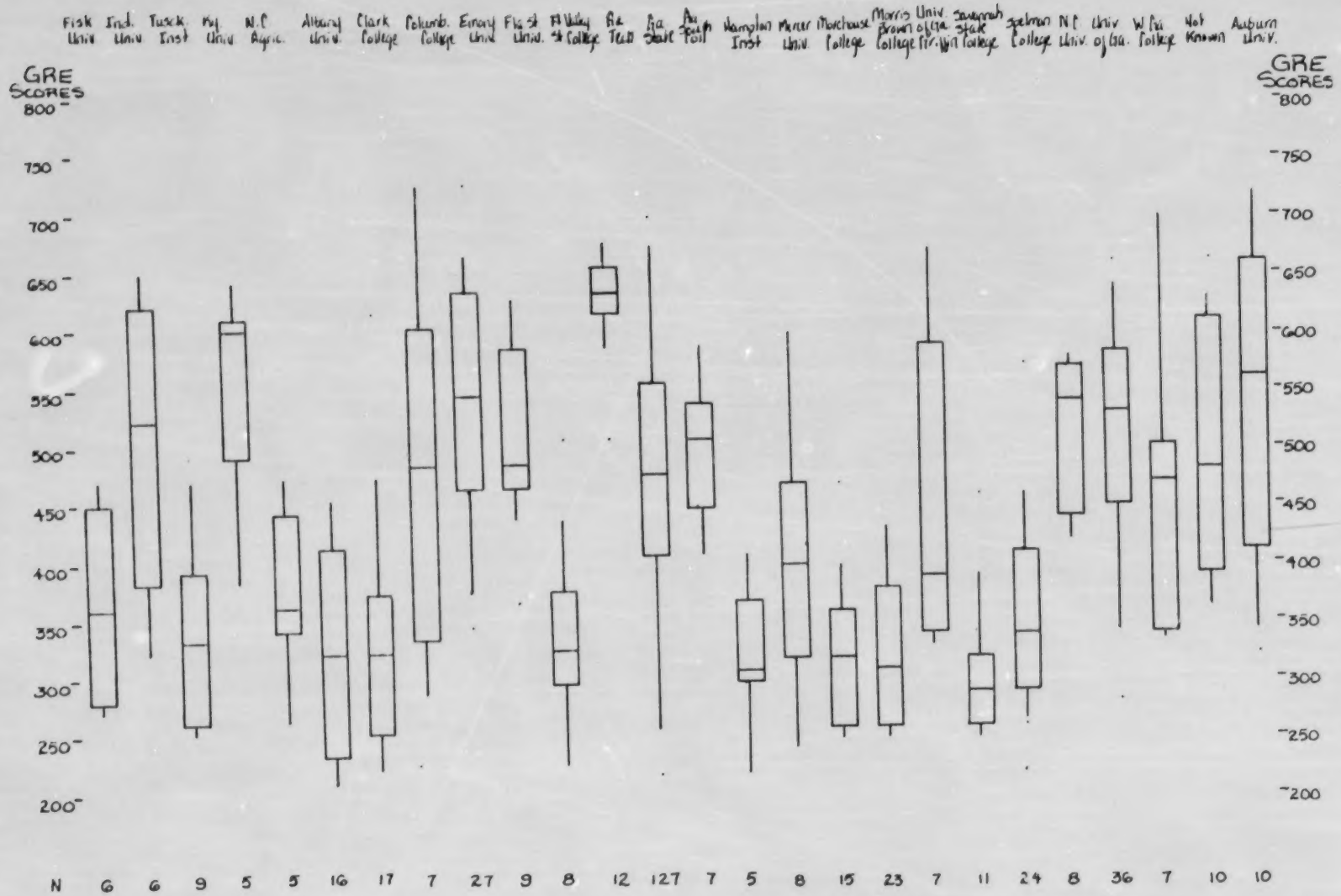
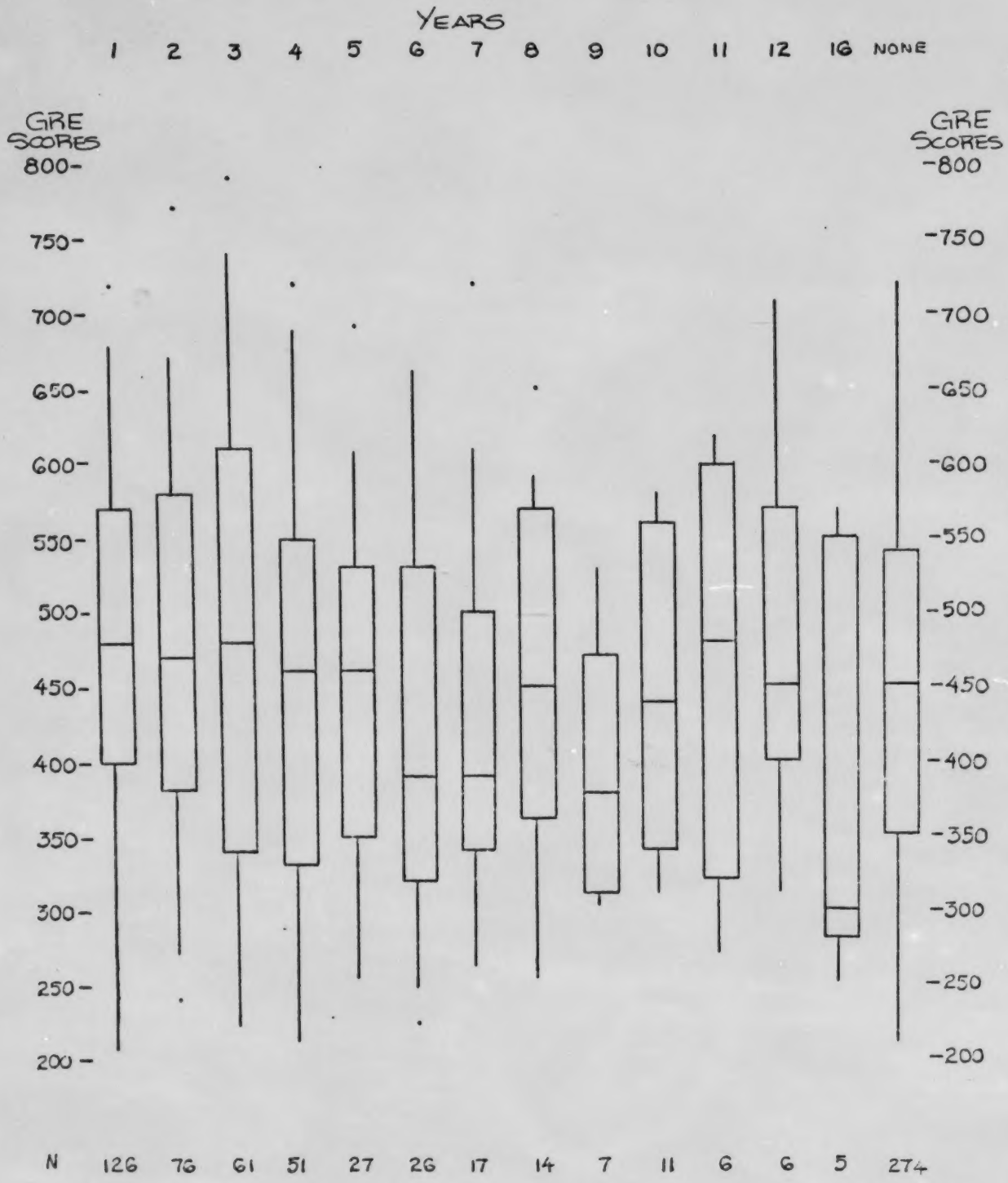


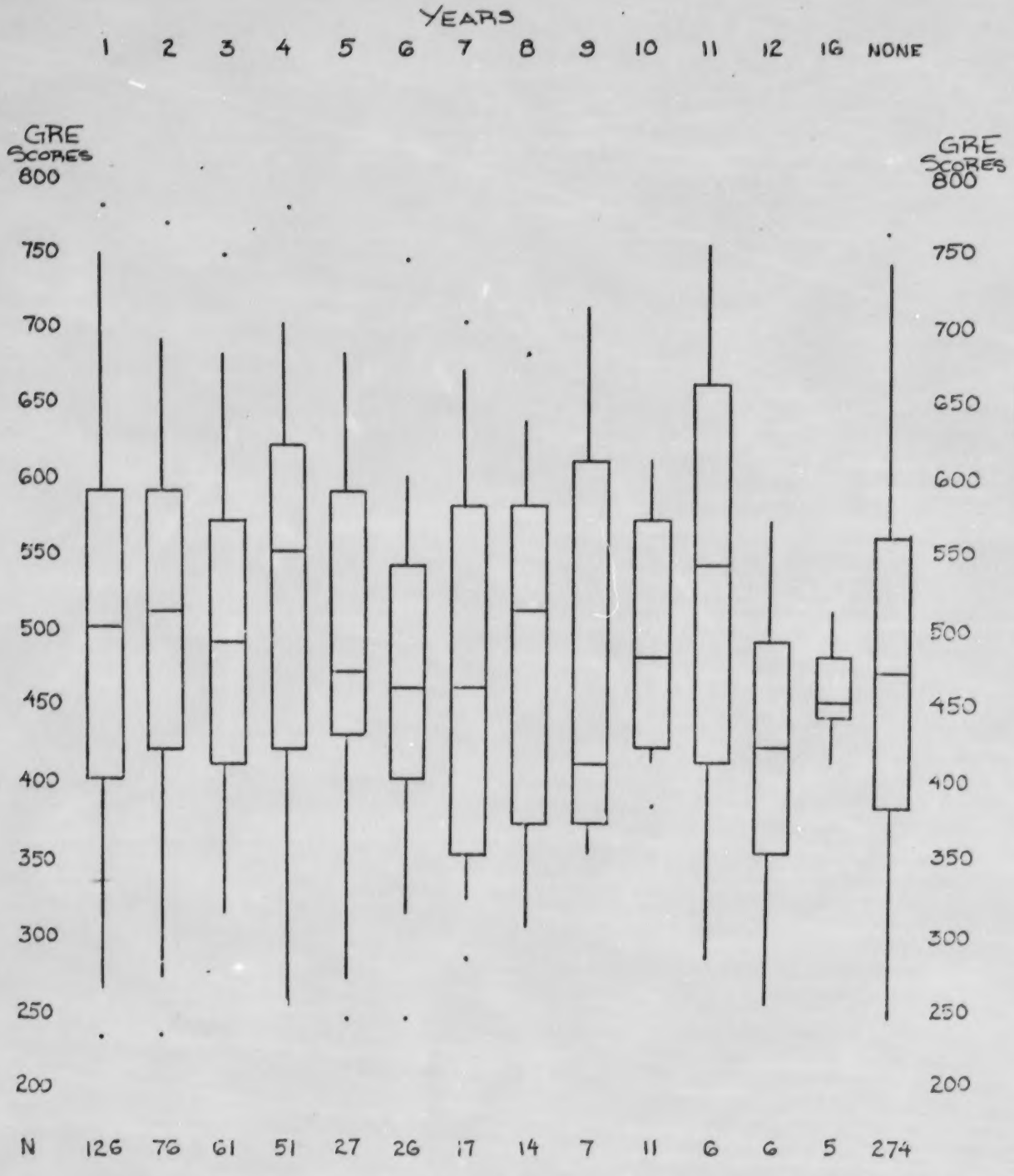
FIGURE 2-9

Distribution of GRE Verbal Scores by Total Years of Full-Time Professional Work Experience at Entry*




* Years with 5 or fewer persons not shown.

FIGURE 2-10
Distribution of GRE Quantitative Scores by Total Years of Full-Time Professional Work Experience at Entry*




* Years with 5 or fewer persons not shown.

FIGURE 2-11
Distribution of GRE Verbal and Quantitative Scores by Current Employment Status at First Entry

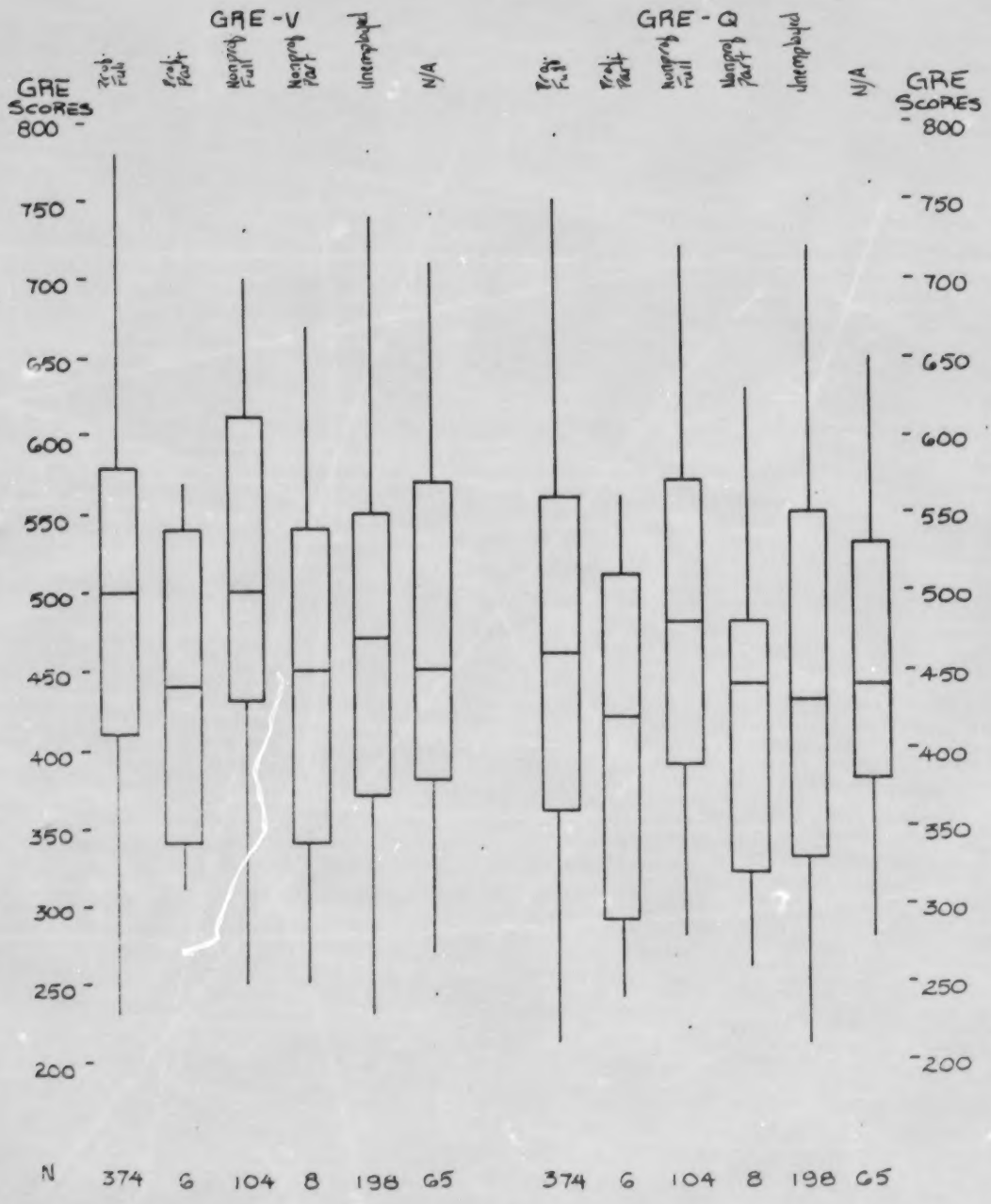


FIGURE 2-12
Distribution of GRE Verbal and Quantitative Scores by Area of Concentration

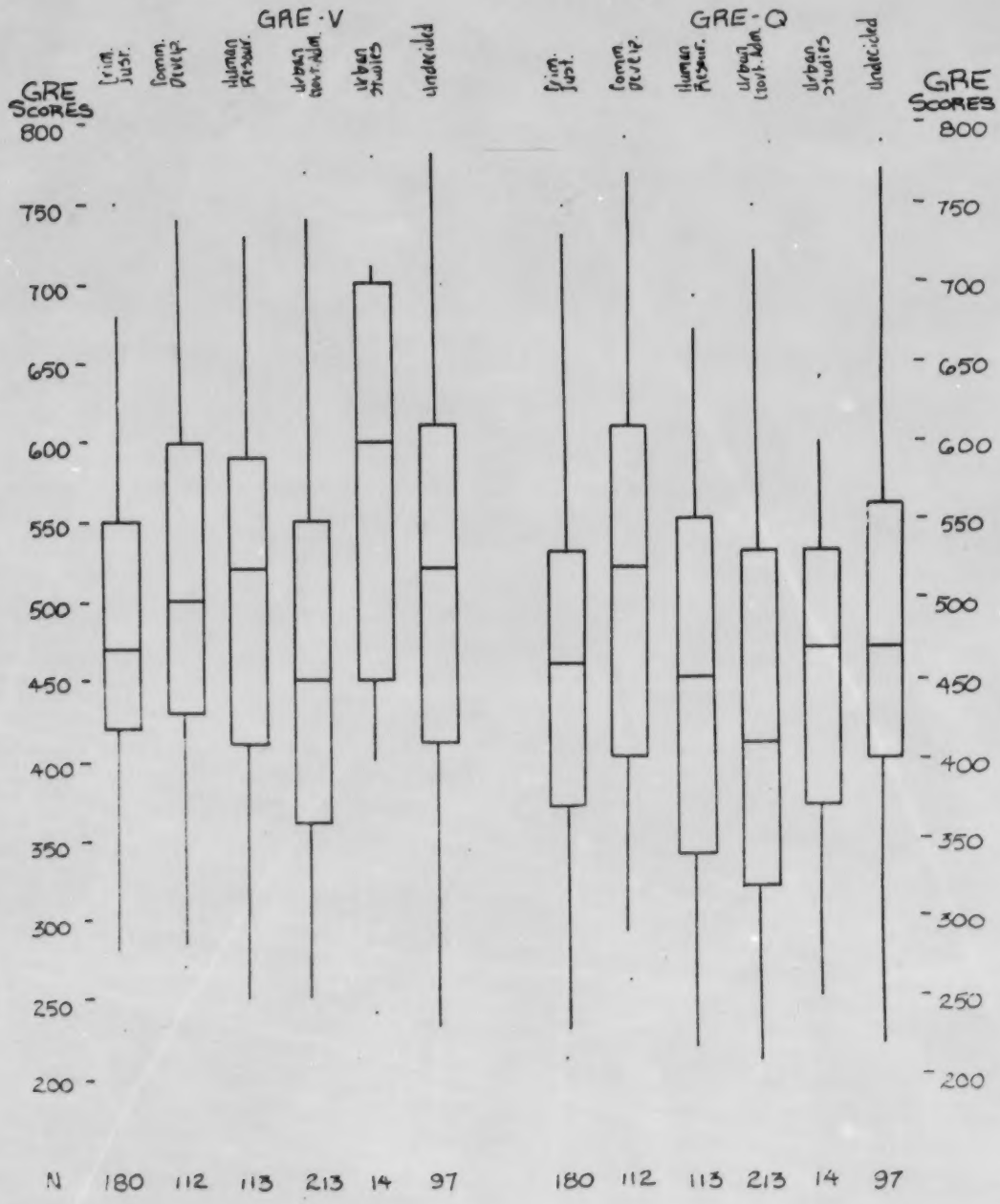


FIGURE 2-13
Distribution of GRE Verbal and Quantitative Scores by Core Exam Results

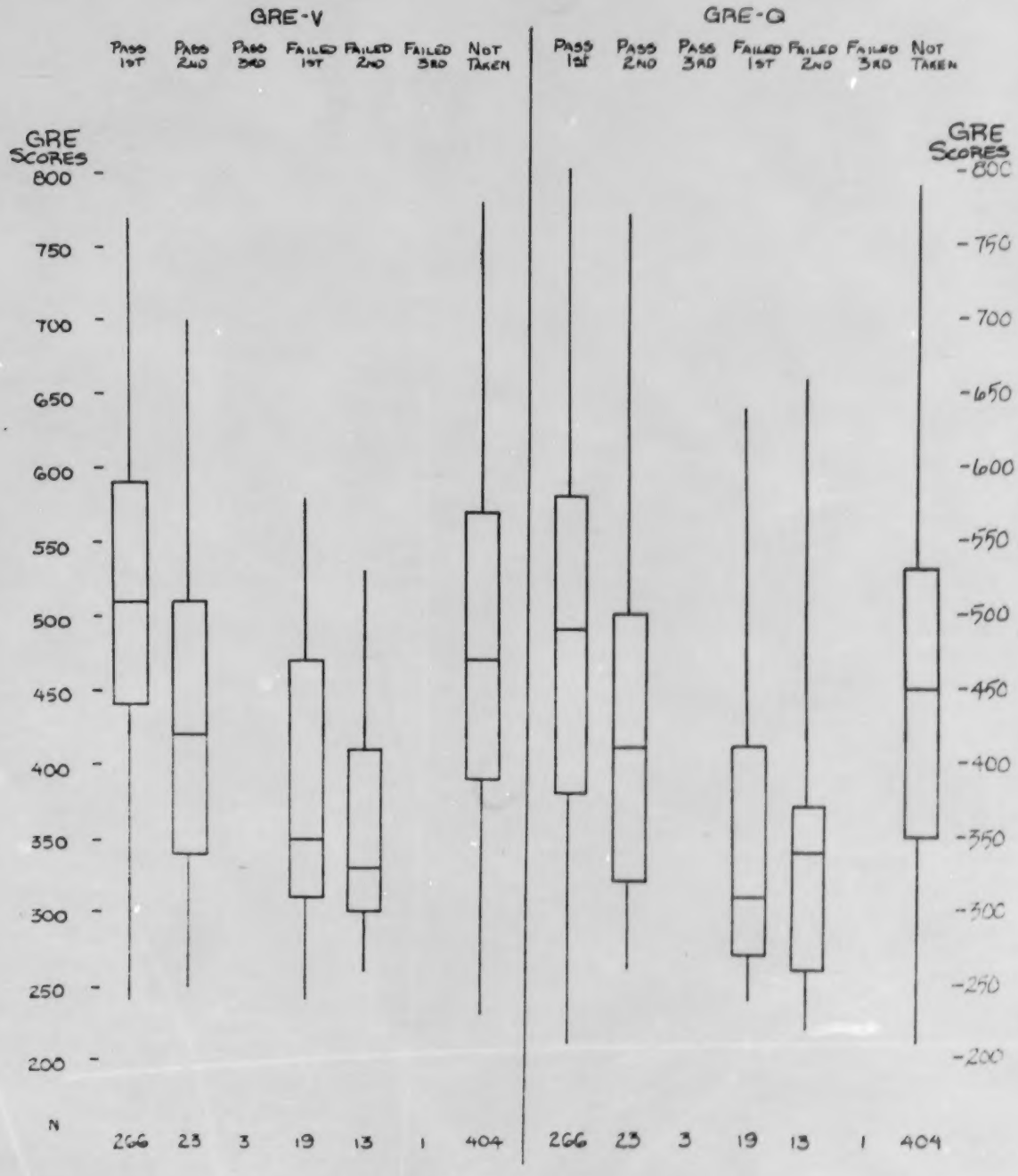
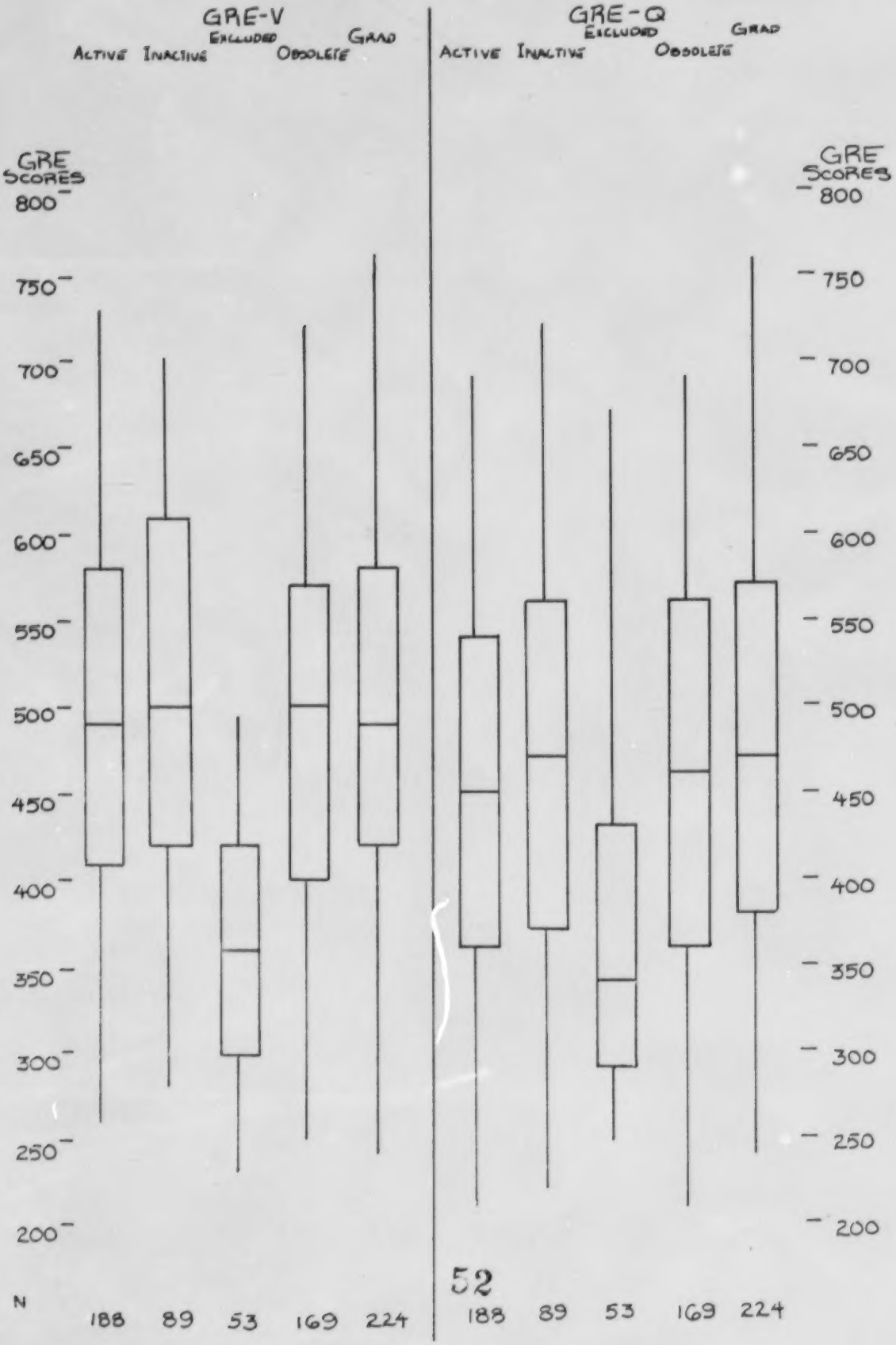


FIGURE 2-14
Distribution of GRE Verbal and Quantitative Scores by Current Status



In Table 2-1 the distribution of grades in the graduate core courses are cross-classified with current enrollment status, as of Summer 1978. This table shows a number of trends. For instance, graduates of the MS program tend to receive higher grades in core courses than those students who have not graduated. Students who were excluded from the program tend to make the lowest grades. Those students in the inactive and obsolete categories generally have move 'W' grades than graduates.

TABLE 2-1

Distribution of Grades in Core Courses with Current Status

| Grades | Active % | Inactive % | Excluded % | Obsolete % | Graduate % | Total % |
|---|---|---|---|---|---|---|
| UL 810 | | | | | | |
| A | 24 | 27 | 11 | 21 | 33 | 27 |
| B | 46 | 39 | 47 | 52 | 57 | 51 |
| C | 3 | 6 | 37 | 4 | 6 | 7 |
| I | 6 | 6 | 0 | 3 | 0 | 3 |
| W | 20 | 21 | 5 | 19 | 3 | 12 |
| Total N | 94 | 33 | 19 | 67 | 154 | 370 |
| UL 820 | | | | | | |
| A | 19 | 42 | 0 | 23 | 34 | 27 |
| B | 63 | 48 | 64 | 59 | 59 | 59 |
| C | 5 | 6 | 15 | 5 | 3 | 6 |
| D&F | 2 | 0 | 12 | 8 | 0 | 3 |
| W | 11 | 3 | 9 | 5 | 3 | 6 |
| Total N | 63 | 31 | 33 | 61 | 14 | 334 |
| UL 830 | | | | | | |
| A | 45 | 43 | 43 | 37 | 59 | 48 |
| B | 45 | 23 | 57 | 40 | 38 | 40 |
| I | 3 | 13 | 0 | 12 | 0 | 5 |
| W | 7 | 20 | 0 | 11 | 2 | 7 |
| Total N | 58 | 30 | 14 | 75 | 138 | 311 |
| UL 840 | | | | | | |
| A | 22 | 29 | 4 | 12 | 28 | 23 |
| B | 56 | 39 | 52 | 57 | 69 | 59 |
| C | 11 | 12 | 40 | 9 | 3 | 10 |
| I | 2 | 5 | 0 | 5 | 0 | 2 |
| W | 9 | 15 | 0 | 17 | 0 | 7 |
| Math 796 | | | | | | |
| A | 50 | 46 | 19 | 0 | 42 | 43 |
| B | 13 | 23 | 19 | 0 | 36 | 24 |
| C | 9 | 8 | 38 | 0 | 11 | 12 |
| F | 3 | 15 | 19 | 0 | 2 | 4 |
| W | 25 | 8 | 6 | 100 | 9 | 16 |
| Total N | 108 | 13 | 16 | 4 | 111 | 261 |
| Math 795 | | | | | | |
| A | 23 | 18 | 12 | 10 | 32 | 21 |
| B | 27 | 18 | 12 | 13 | 22 | 21 |
| C | 19 | 8 | 27 | 5 | 8 | 12 |
| F | 10 | 3 | 27 | 13 | 3 | 8 |
| W | 20 | 39 | 15 | 38 | 5 | 19 |
| S | 4 | 11 | 4 | 13 | 25 | 14 |
| US | 3 | 3 | 4 | 8 | 5 | 4 |
| Total N | 79 | 38 | 26 | 39 | 111 | 301 |

## GRE SCORES AS A PREDICTOR OF COURSE WORK PERFORMANCE

The GRE as mentioned above is mainly a predictor of course performance. This section and the following will explore the relationship between the GRE and course final grade as the criteria of the validity of using the GRE to predict course performance. This is, after all, the GRE stated function.

Simply, the median GRE should be lower as course grades go decline. To the extent that this trend is shown by the data, the use of the GRE as a predictor of course work is validated in a psychometric sense. For instance, for the core course, Figures 3-1 to 3-4 give the distribution of GRE's by course final letter grades.

## CORE COURSE AND GRE'S

The association of GRE's and course grades for Math 795 is given in Figure 3-1. This table shows that ironically, GRE-V is a better predictor of Math 795 performance than is GRE-Q. The predictability does not show up well for F grades. This may well be because F in this course reflects lack of motivation or factors other than quantitative potential. A similar pattern is found for Math 796 in Figure 3-2.

The four UL designated core courses are related to grades in courses with GRE-V in Figure 3-3. The predictability of the GRE-V holds very strongly except for UL 830 (Sociology). Figure 3-4 shows that for UL 830, GRE-Q has a higher median for A's than B's-the very trend showing GRE-Q as a predictor of course work.

FIGURE 3-1
Distribution of GRE Quantitative and Verbal Scores by Grades in Math 795

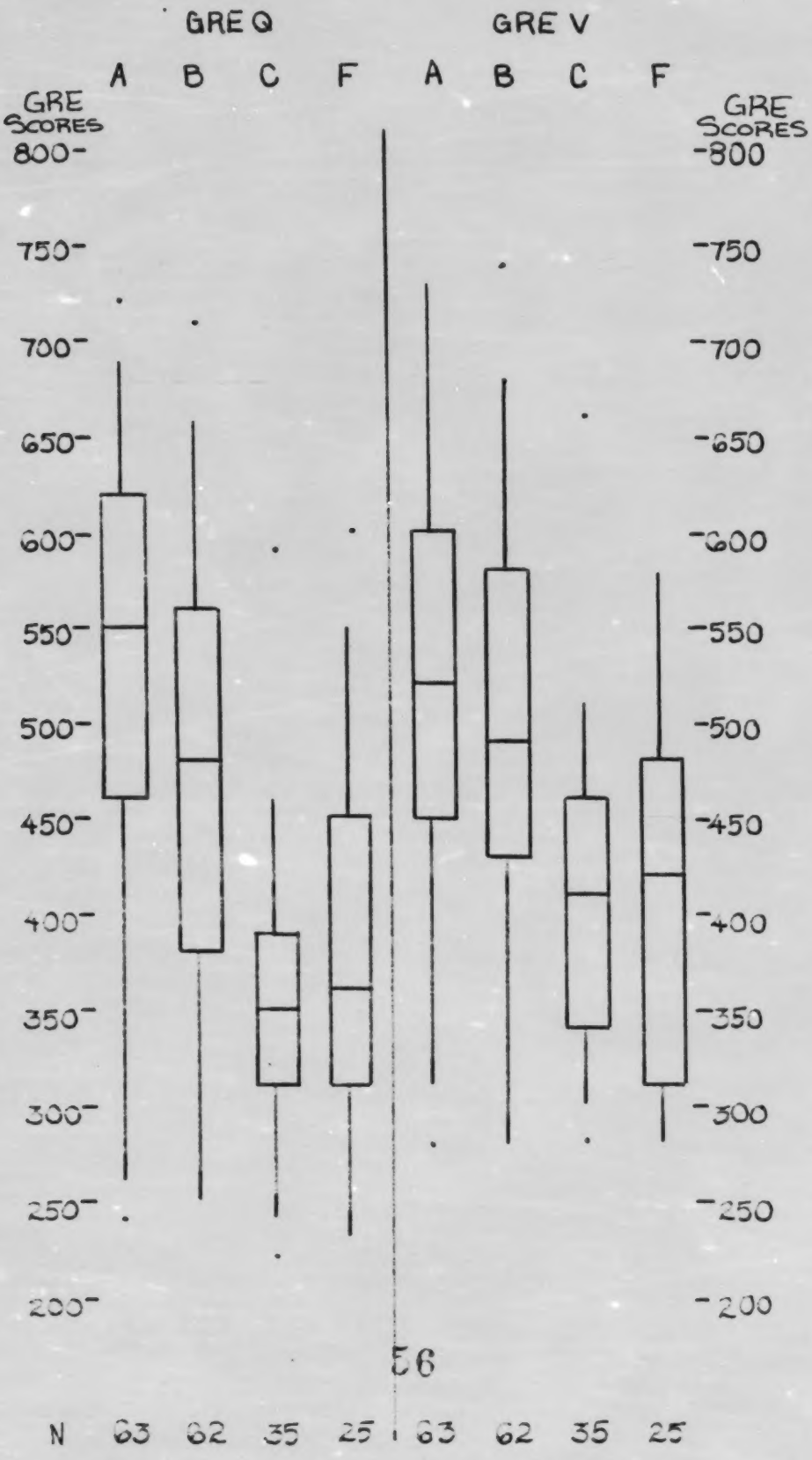


FIGURE 3-2
Distribution of GRE Quantitative and Verbal Scores by Grades in Math 796

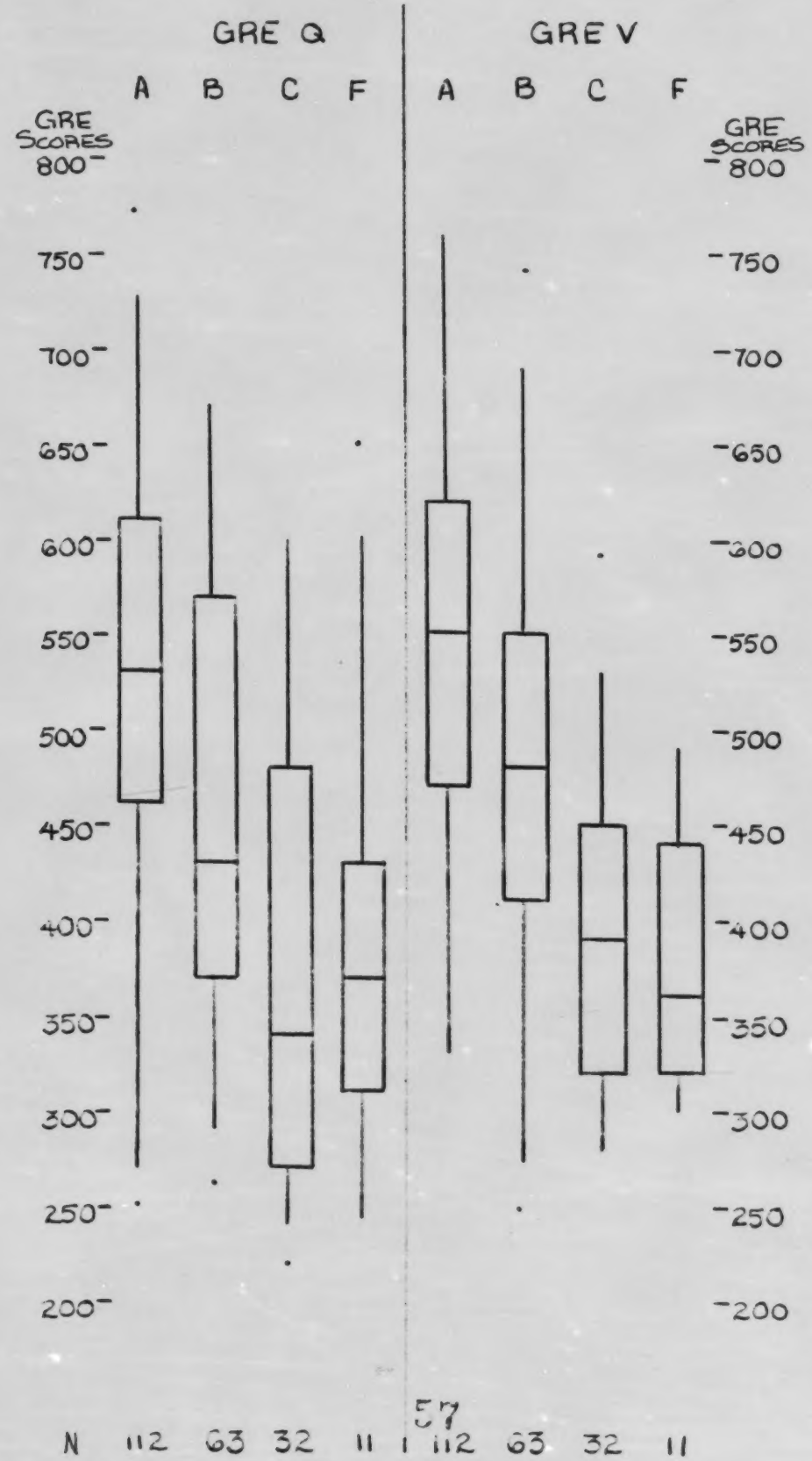


FIGURE 3-3

Distribution of GRE Verbal Scores by Grades in U.L. Core Courses

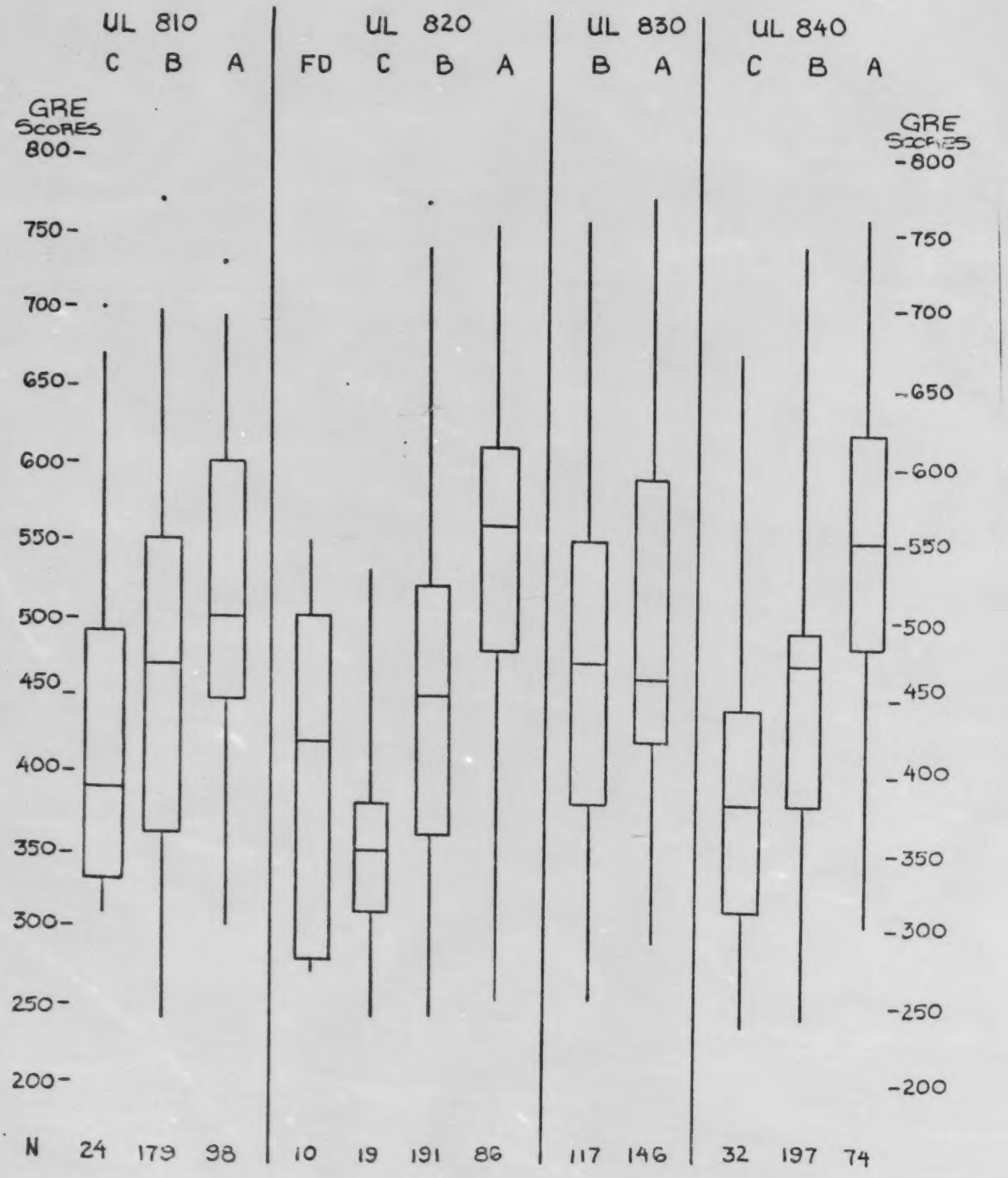
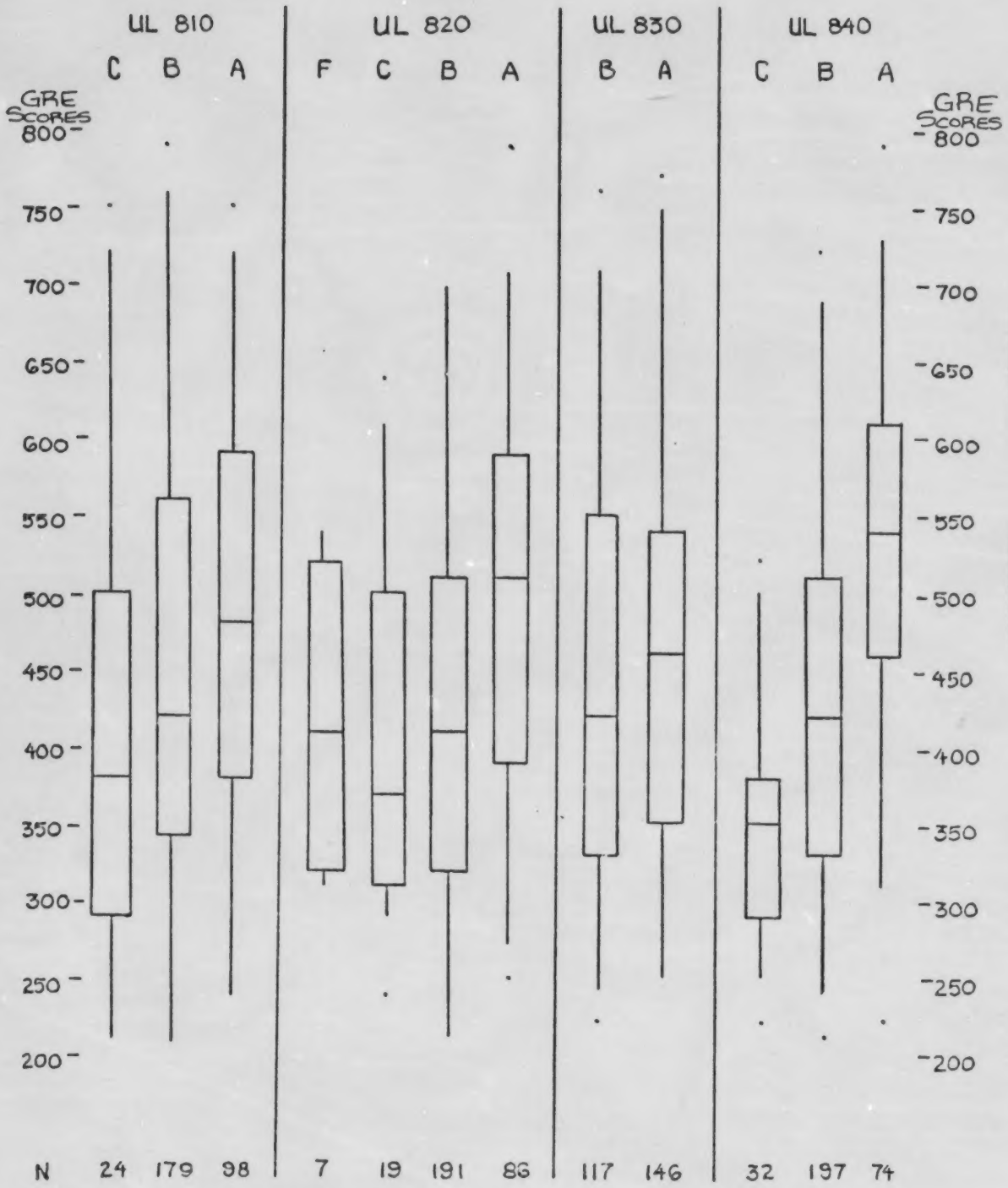


FIGURE 3-4
Distribution of GRE Quantitative Scores by Grades in U.L. Core Courses



## VALIDATION STUDY FOR GRE AND COURSE WORK FOR MINORITY STUDENTS

The analysis of the previous section will now be repeated for minority students in order to test the validity of the GRE as a predictor of their course grades. The Math 795 data is found in Figure 4-1 which indicates that for F's, C's and B's, higher median GRE's are associated with higher grades. This does not hold for A's.

For minority students in general, the higher the median GRE score, the higher the grade in the core course which is the pattern previously found for the total student group. Here again UL 830 deviates from the trend. (See Figures 4-3 and 4-4).

FIGURE 4-1

Distribution of GRE Quantitative and Verbal Scores by Grades of Minority Students in Math 795

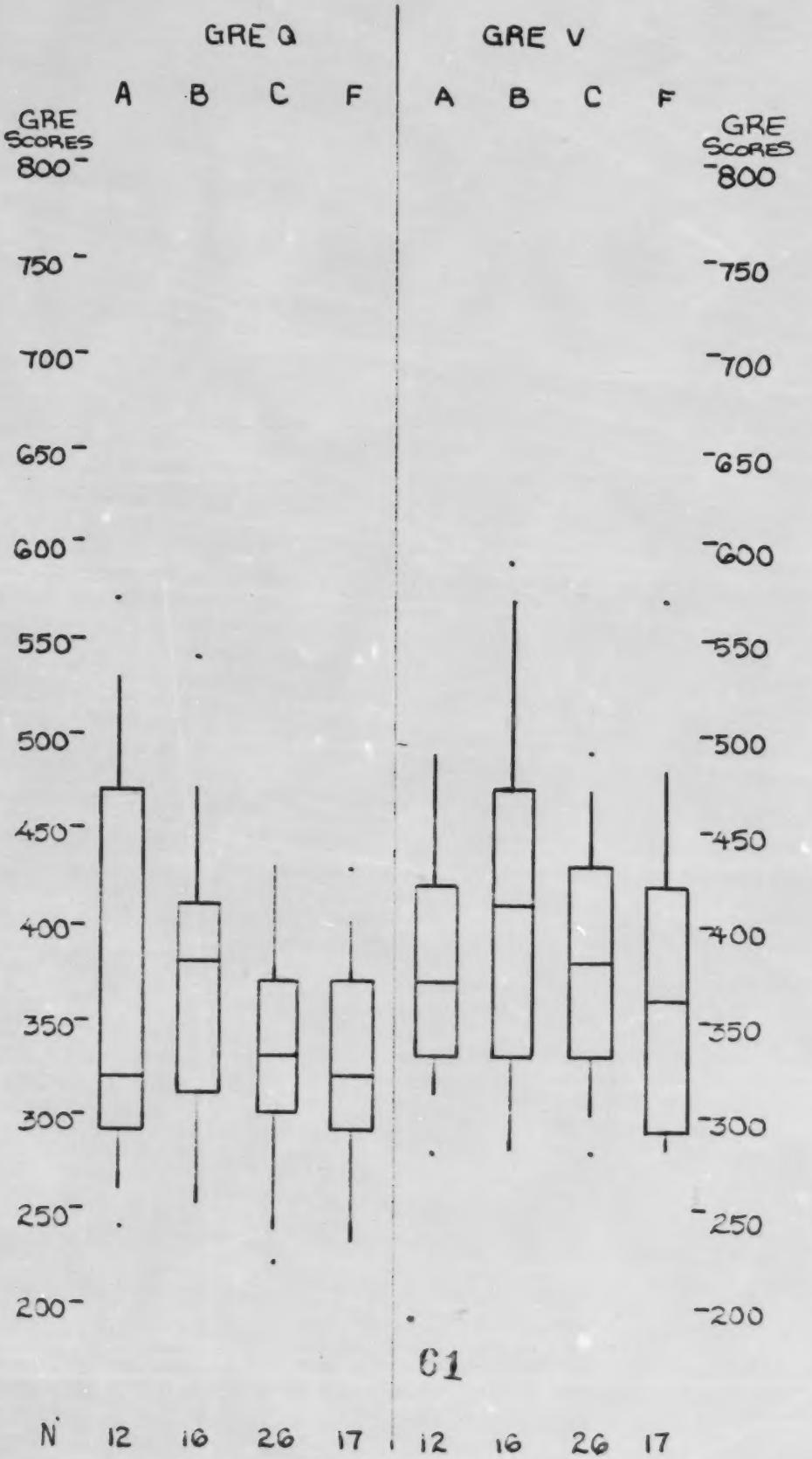


FIGURE 4-2
Distribution of GRE Quantitative and Verbal Scores by Grades of Minority Students in Math 796

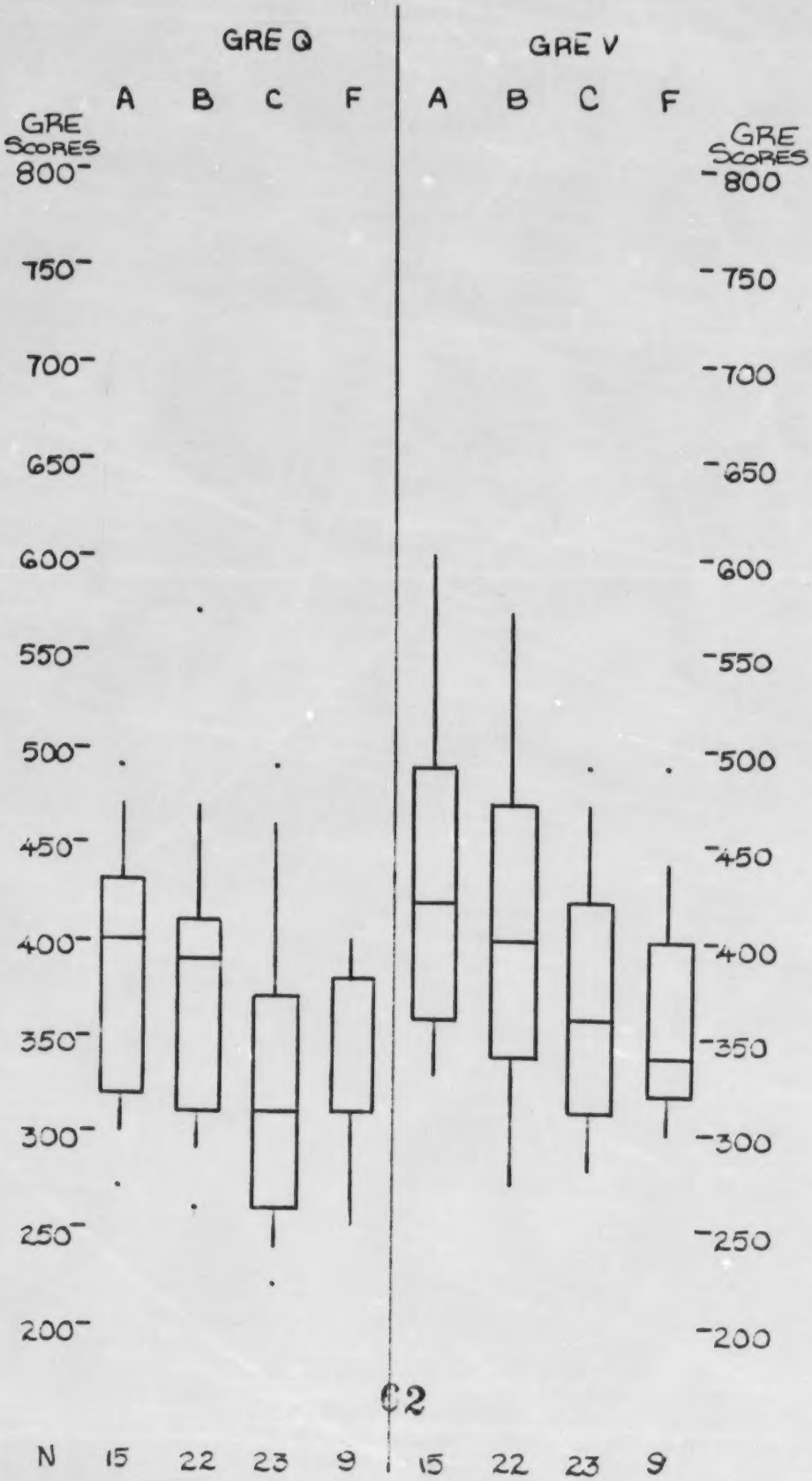


FIGURE 4-3
Distribution of GRE Verbal Scores of Minority Students by Grades in U.L. Core Courses

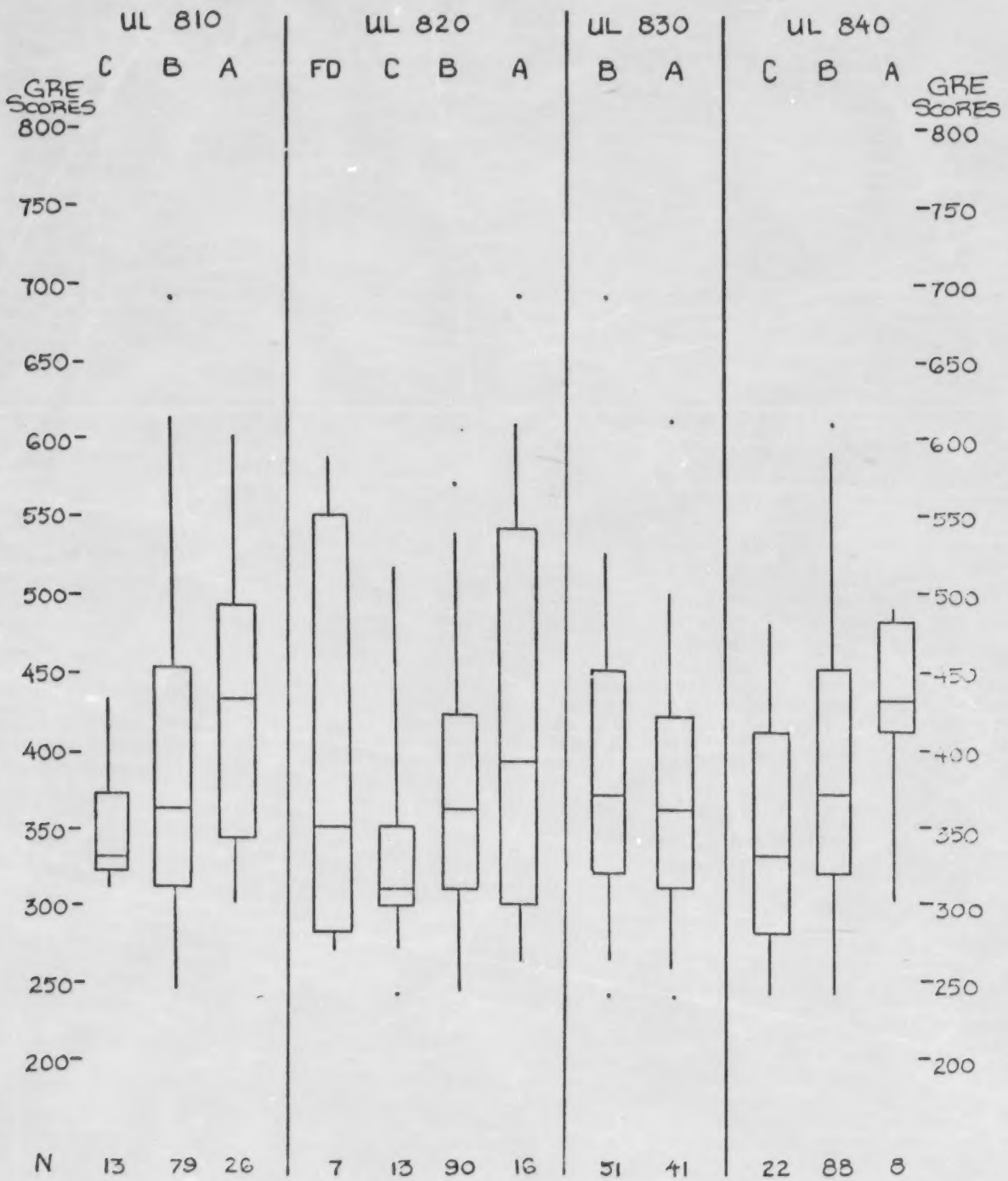
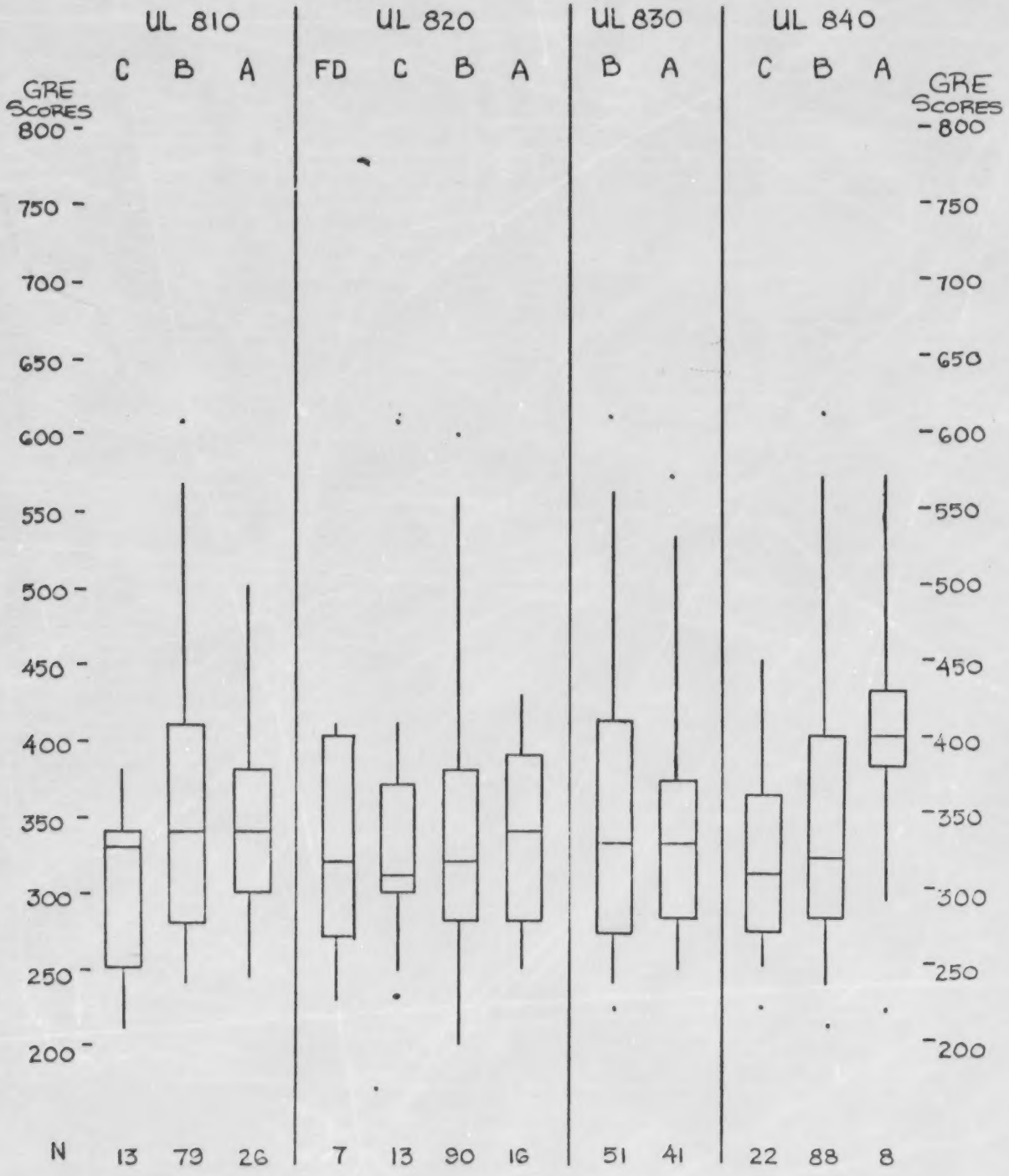


FIGURE 4-4
Distribution of GRE Quantitative Scores of Minority Students by Grades in U.L. Core Courses



## UL GRADUATE COURSE GRADES AND GRE SCORES

In this section a range of Urban Life graduate courses are considered. In Figures 5-1 through 5-4, the distributions of GRE scores with Urban Life graduate course grades are displayed. This section may be summarized as follows:

* UL 801 and UL 802 both show a clear positive association between GRE and course grades (Figure 5-1).
* UL 803 shows no consistent relationship between grade and GRE's.
* Both UL 845 and UL 846 show a positive trend of grades and scores (Figure 5-2).
* UL 847 and 848 (Figure 5-3) along with UL 891 and 895 (Figure 5-4) indicate a positive trend of GRE's and grades.

The small number of students in some of these categories may impact upon the consistency of these associations.

FIGURE 5-1
Distribution of GRE Quantitative and Verbal Scores by Grades in U.L. Graduate Courses

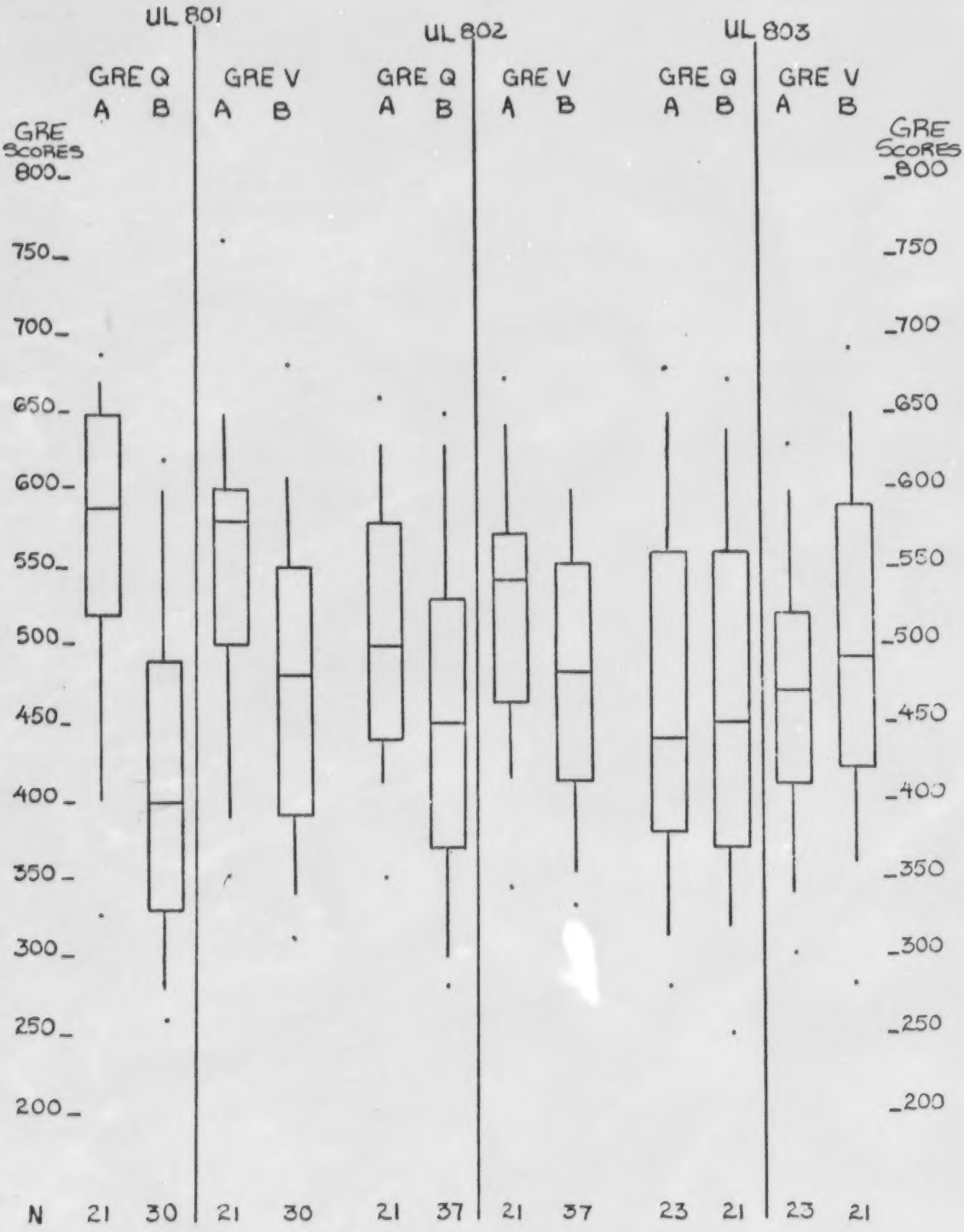


FIGURE 5-2
Distribution of GRE Quantitative and Verbal Scores by Grades in U.L. Graduate Courses

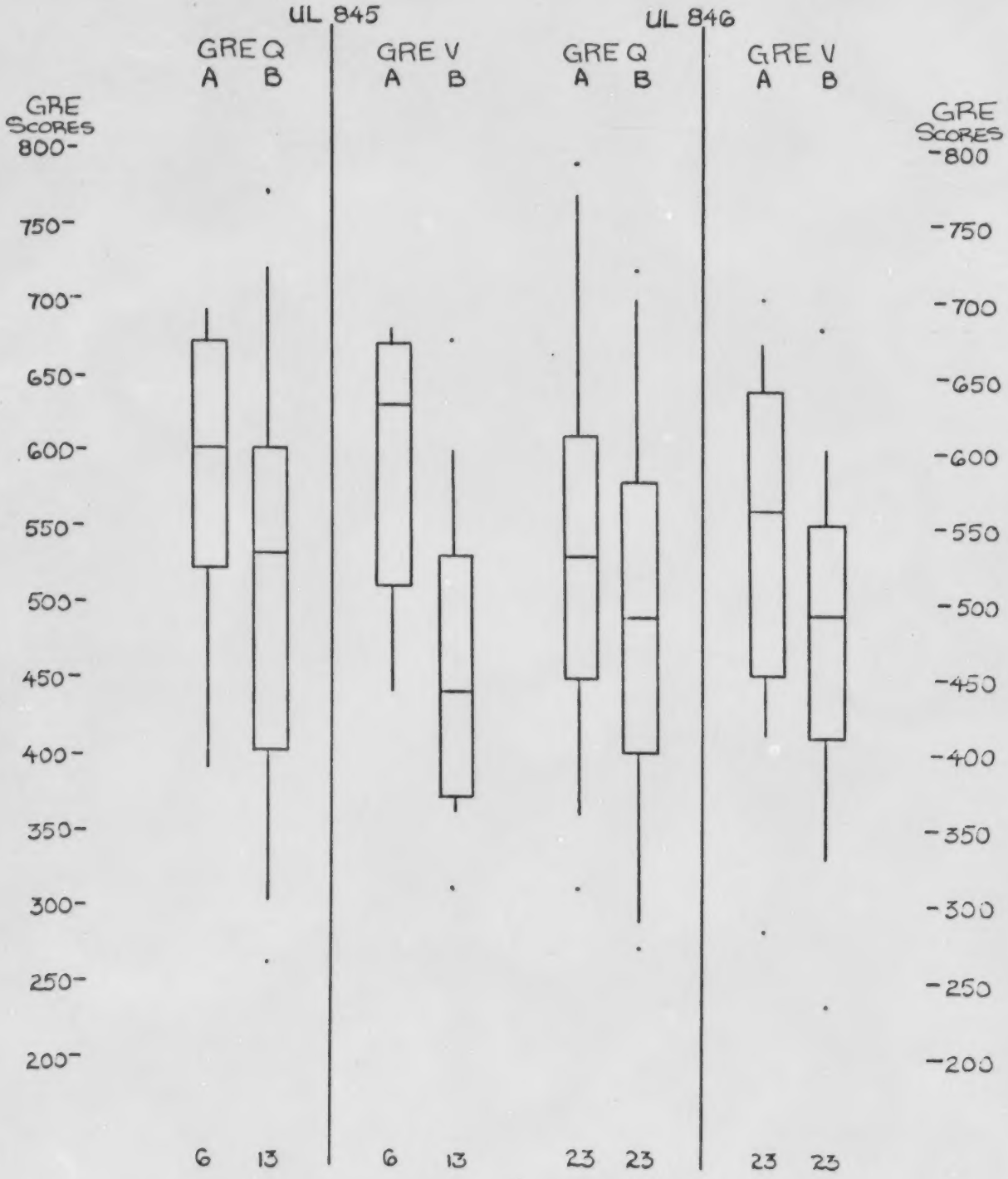


FIGURE 5-3
Distribution of GRE Quantitative and Verbal Scores by Grades in U.L. Graduate Courses

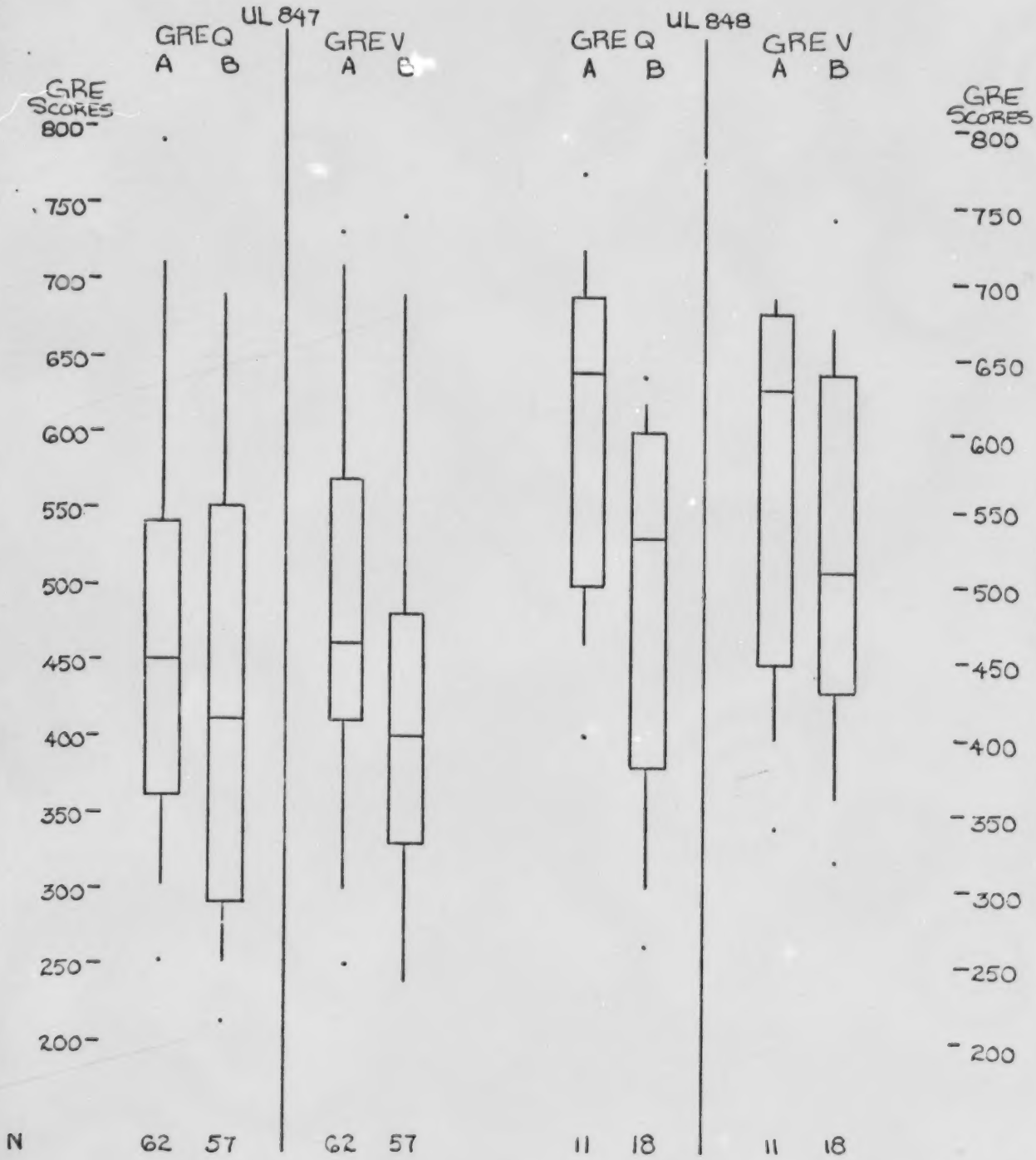
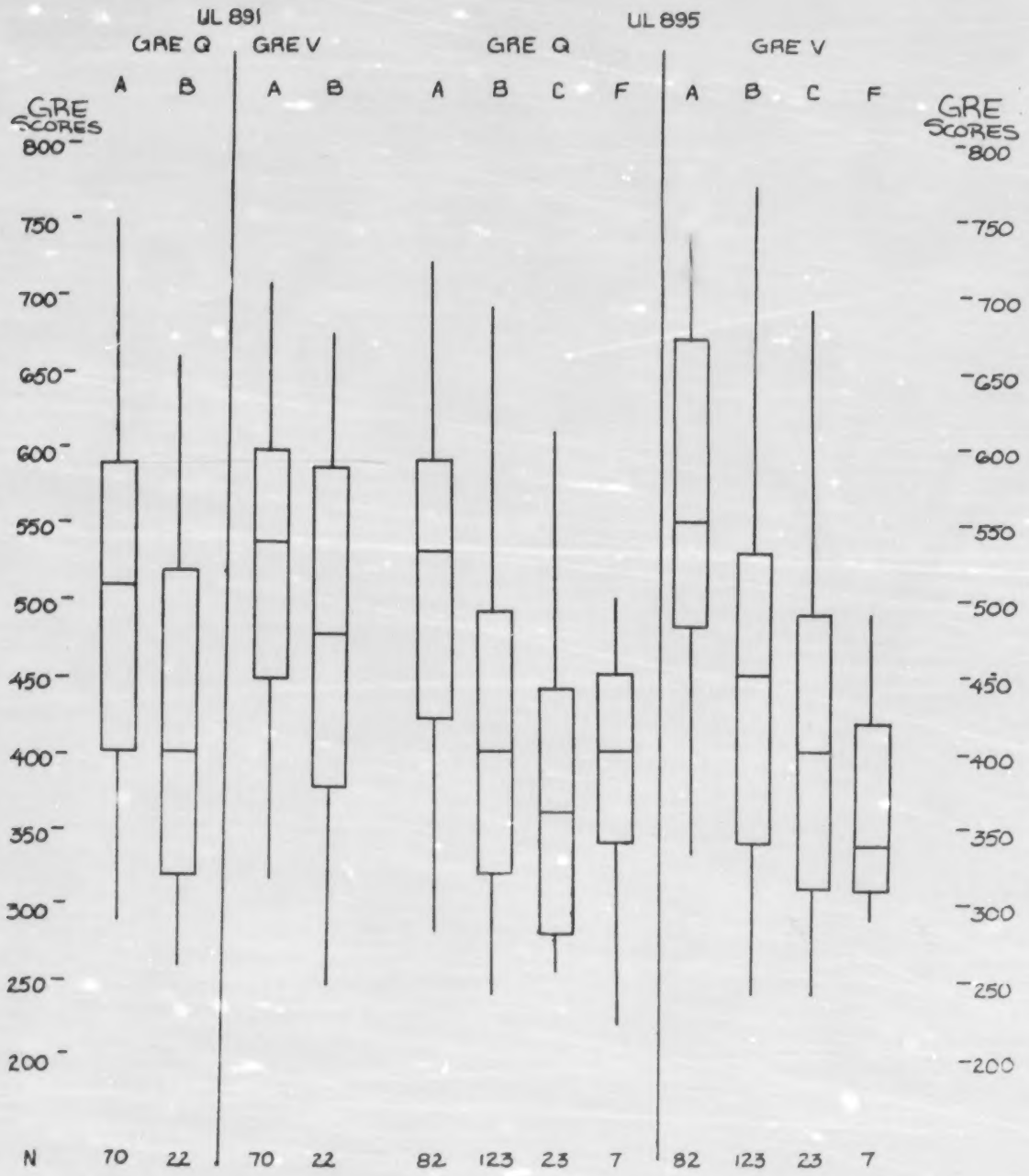


FIGURE 5-4
Distribution of GRE Quantitative and Verbal Scores by Grades in U.L. Graduate Courses



## COURSE GRADES AND GRE SCORES FOR MINORITY STUDENTS

The graphs of this section relate GRE scores and course grades for minority students. The figures of this section are summarized as follows:

* The GRE-V shows a positive trend between higher scores and higher grades for BA 802, BL 406, EAS 863 and INS 815 (Figure 6-1). These courses show mixed results for GRE-Q (Figure 6-2).

* RE 810 and UL 847 show similar positive associations.

* POLS 844 shows a negative relationship between GRE-V and grades.

* The same pattern holds for GRE-Q where RE 810 and UL 847 are positive and POLS 844 are negative (Figure 6-4).

* UL 891 and UL 895 show positive association with course grades and GRE-V and GRE-Q.

FIGURE 6-1
Distribution of GRE Verbal Scores by Grades of Minority Students in GSU Graduate Courses

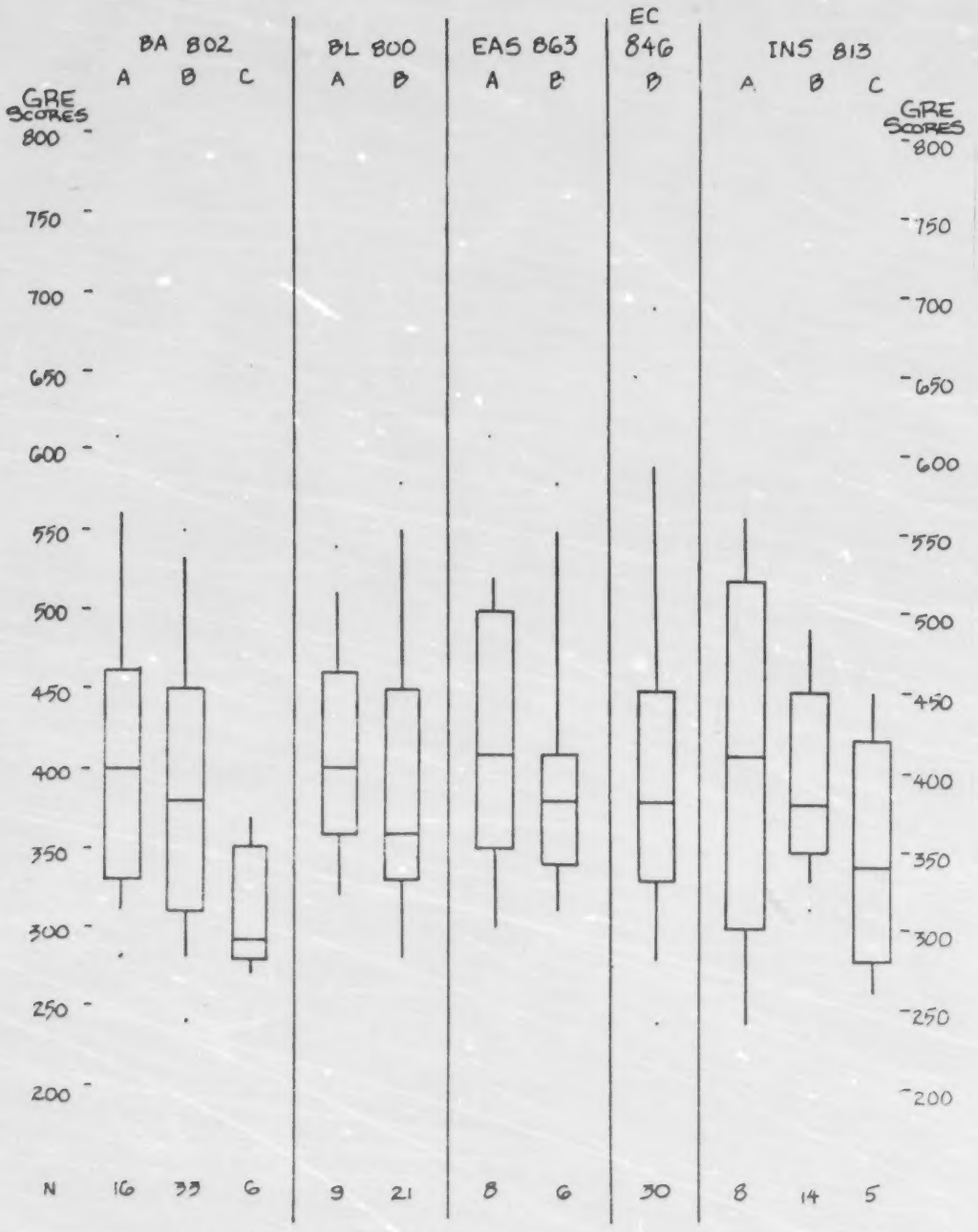


FIGURE 6-2
Distribution of GRE Quantitative Scores by Grades of Minority Students in GSU Graduate Courses

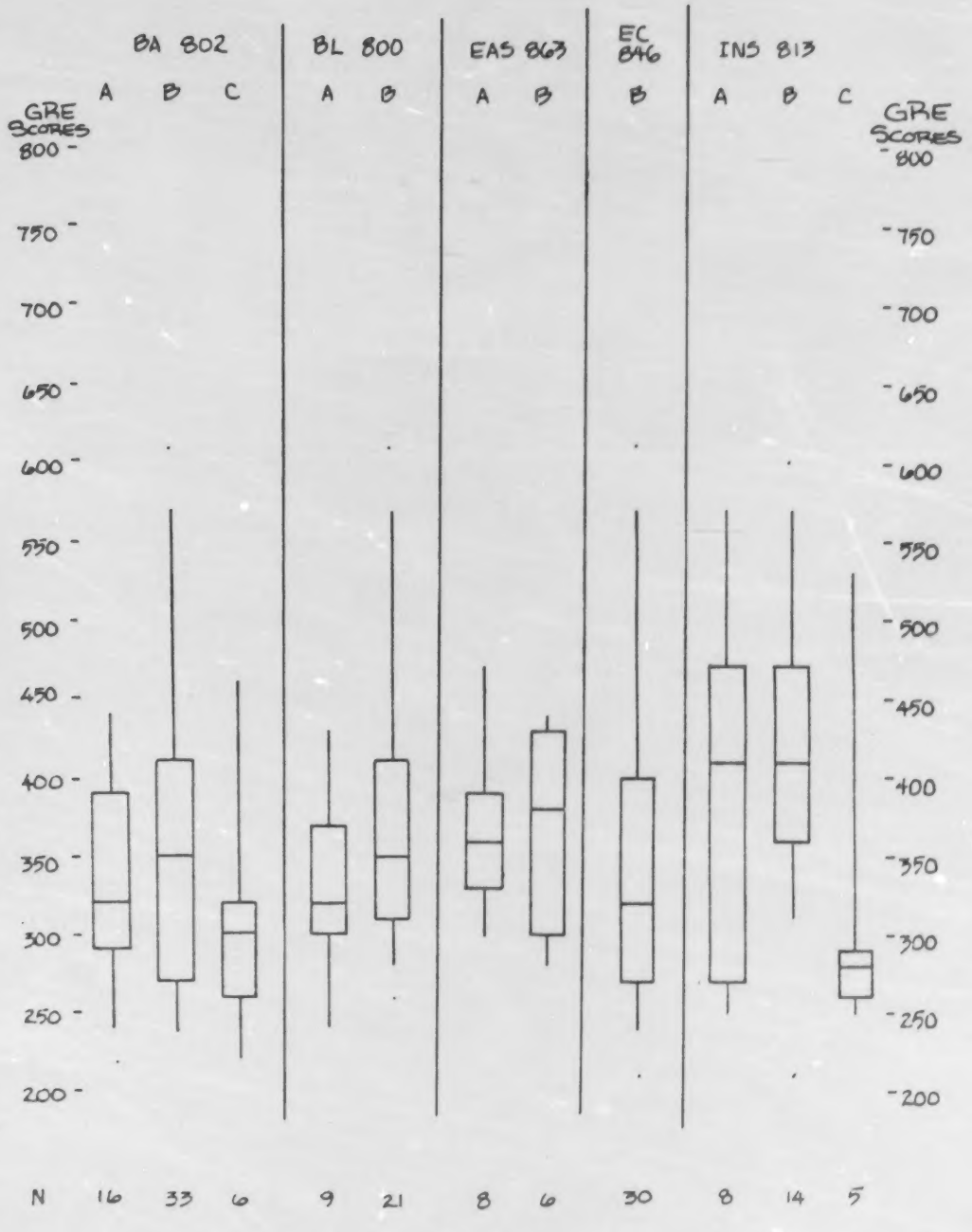


FIGURE 6-3
Distribution of GRE Verbal Scores by Grades of Minority Students in GSU Graduate Courses

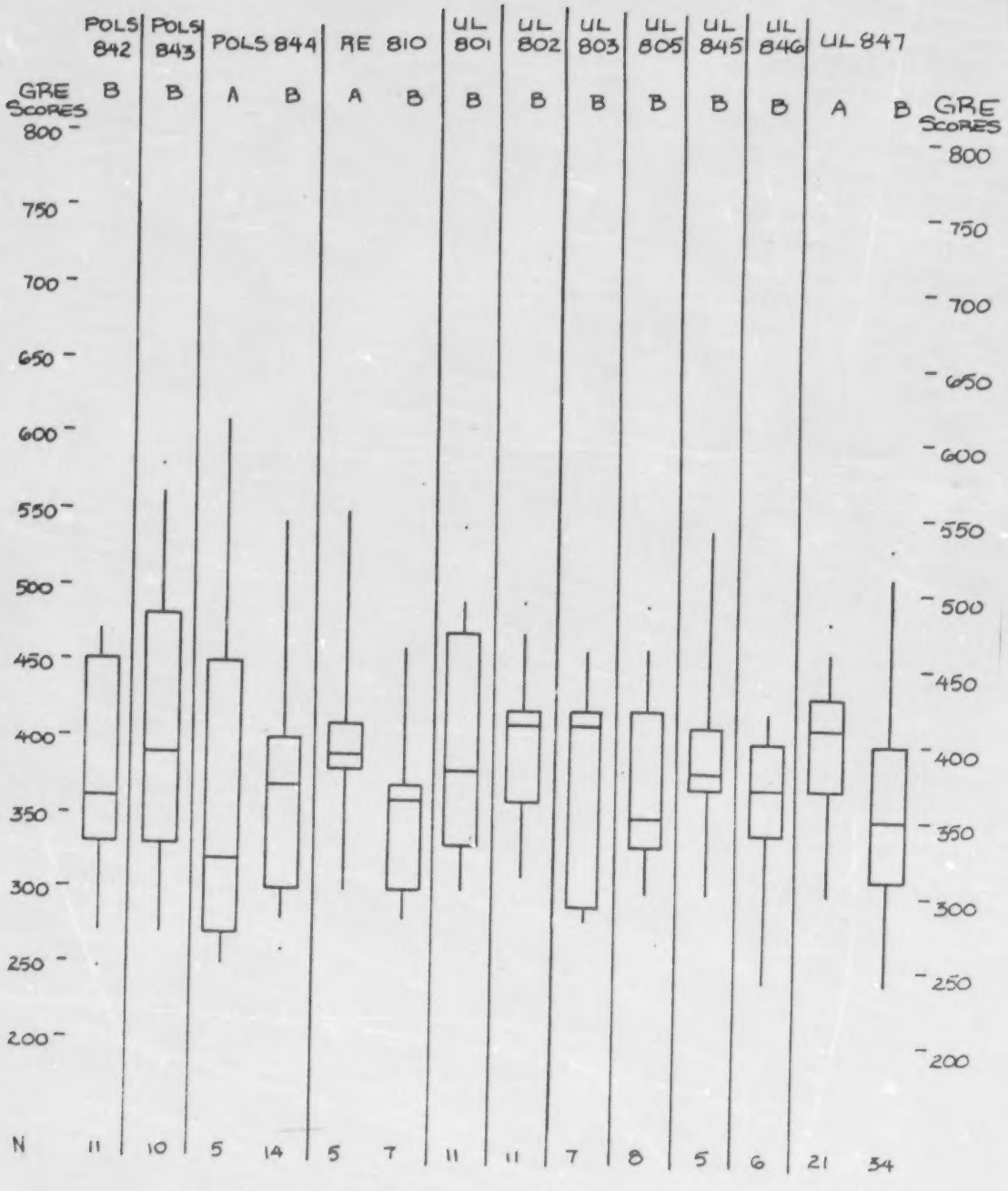


FIGURE 6-4
Distribution of GRE Quantitative Scores by Grades of Minority Students in GSU Graduate Courses

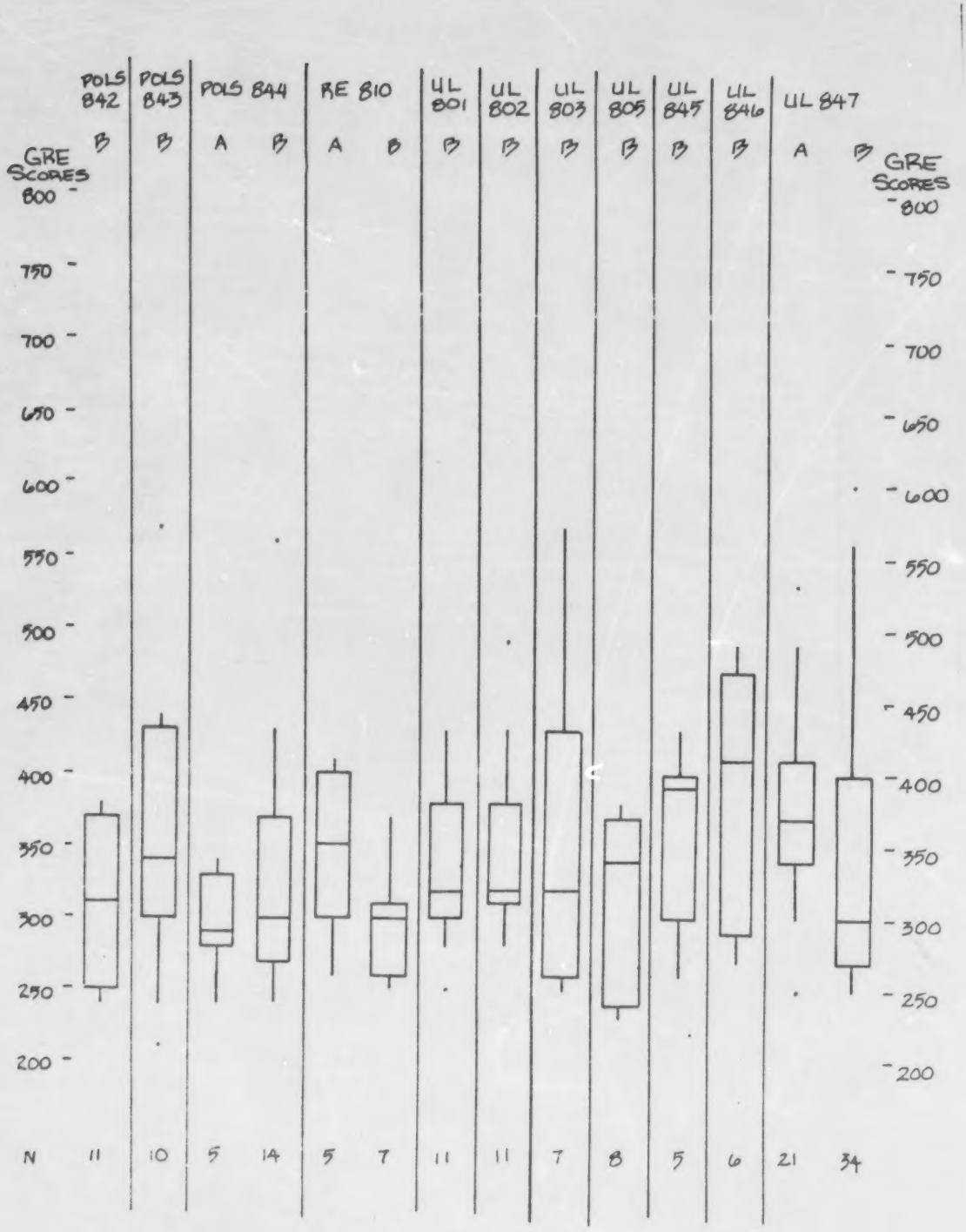
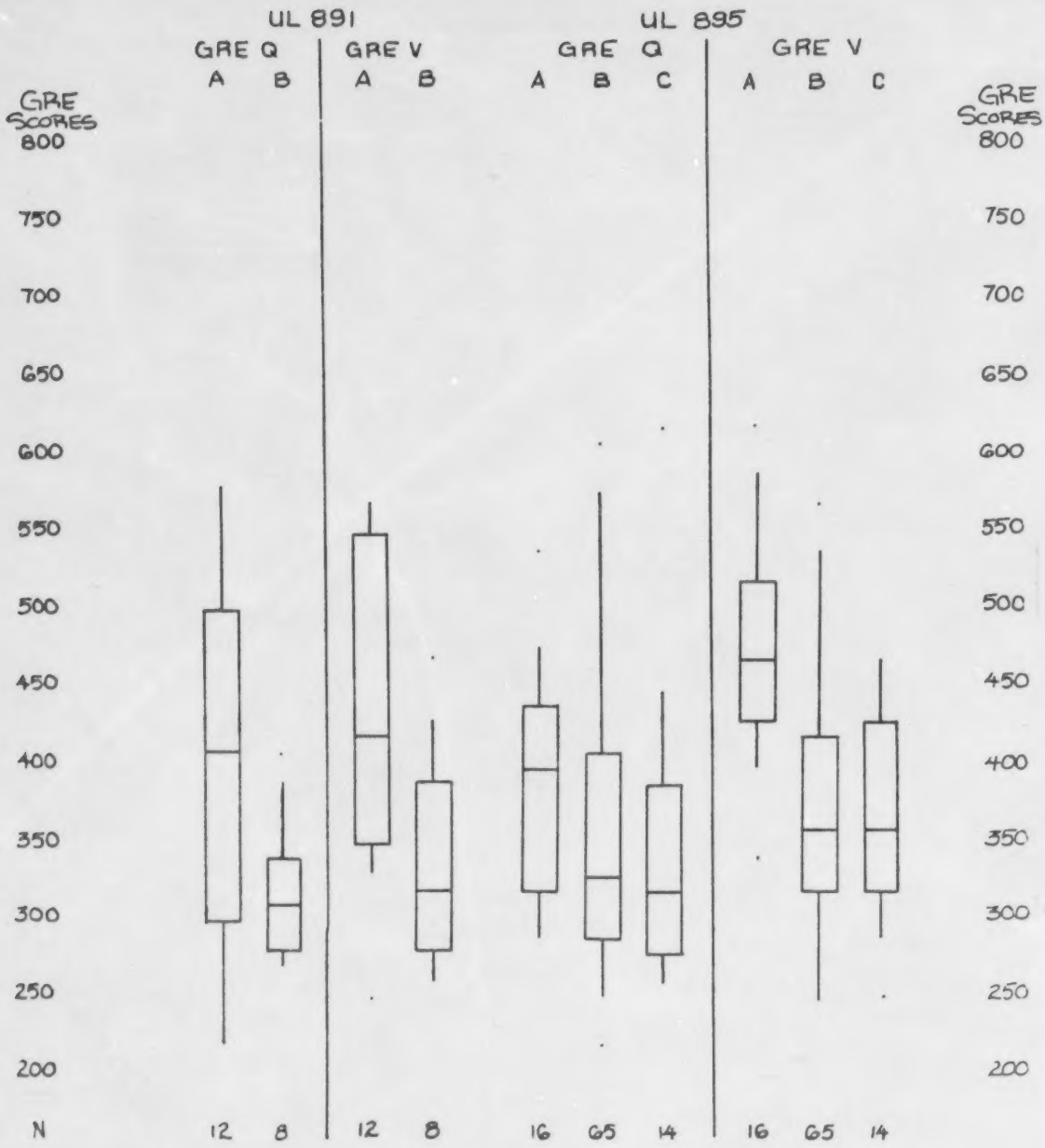


FIGURE 6-5
Distribution of GRE Verbal and Quantitative Scores by Grades of Minority Students in U.L. Graduate Courses



## THE RELATIONSHIP BETWEEN GRE SCORES AND NON-UL COURSE GRADES

These non-core and non-Urban Life courses are shown in this section relating GRE scores with course final grades. The following is a short summary of this section of graphs:

* BA 801, BA 802, BL 800, BL 830 (Figure 7-1), CPS 601, CPS 603, CPS 741, CPS 743, CPS 797 (Figure 7-2), EAS 810, EAS 803, EC 846, INS 813 (Figure 7-3), MGT 840, POLS 812, POLS 842, POLS 844, (Figure 7-4), POLS 846, PSY 609, RE 810, RE 830 (Figure 7-5) and SOC 812 (Figure 7-6) show a positive relationship between GRE-V and grades.

* RE 850 (Figure 7-5) and SOC 820 (Figure 7-6) both show a negative association of grades and GRE-V.

* The courses that have a positive relationship of GRE-Q and course grades are: BA 802, BL 800, BL 840 (Figure 7-7), EC 846 (Figure 7-8), MGT 820, MGT 840, POLS 842, POLS 843 (Figure 7-9), POLS 844, POLS 846, PSY 609, and RE 830 (Figure 7-10).

* A negative relationship between course grades and GRE-Q was found in these courses: BA 801, (Figure 7-7), CPS 741, CPS 743, EAS 863 (Figure 7-8), POLS 812 (Figure 7-9), RE 850, and SOC 812 (Figure 7-11).

FIGURE 7-1

istribution of GRE Quantitative Scores by Grades in GSU Graduate Courses

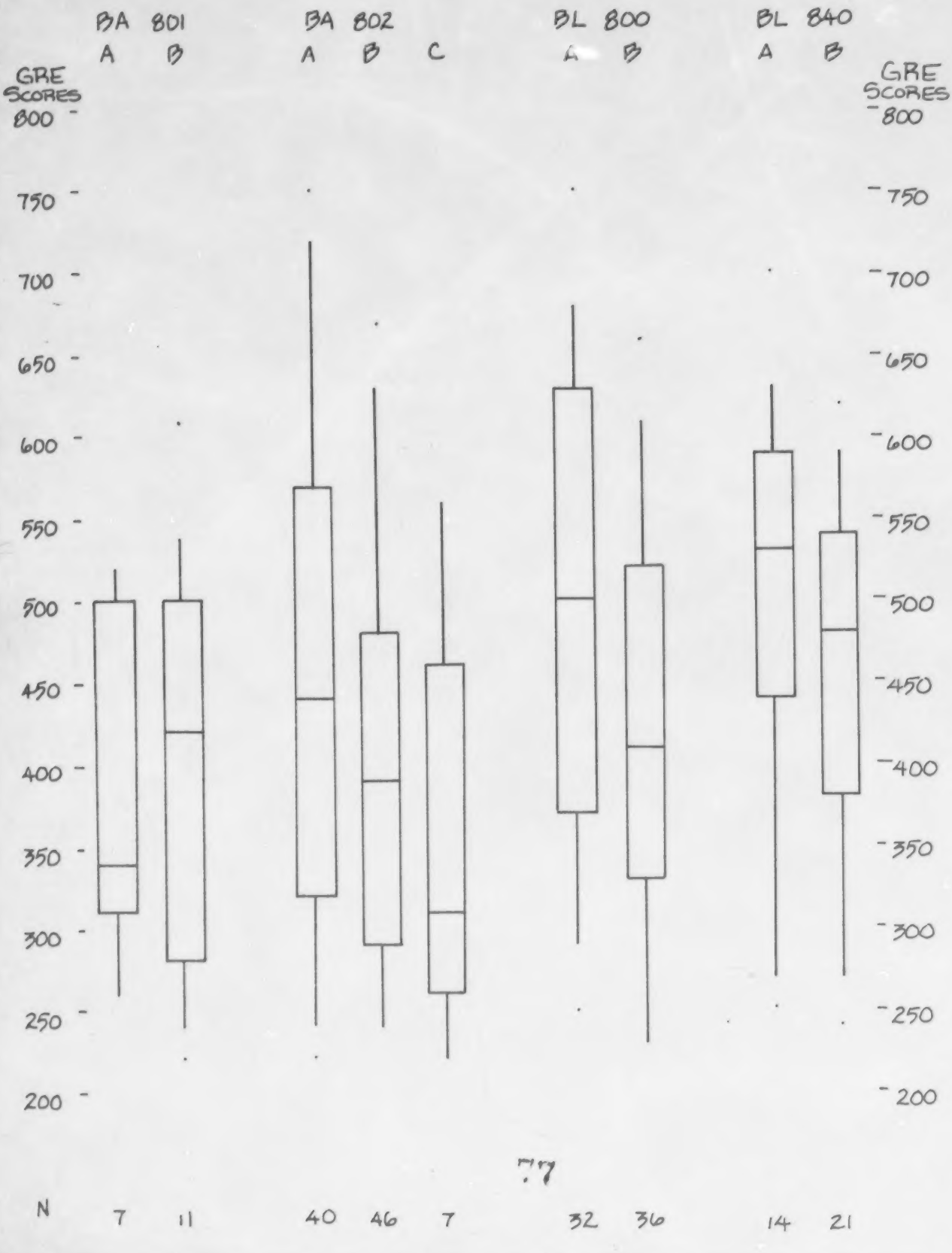



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FIGURE 7-2
Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

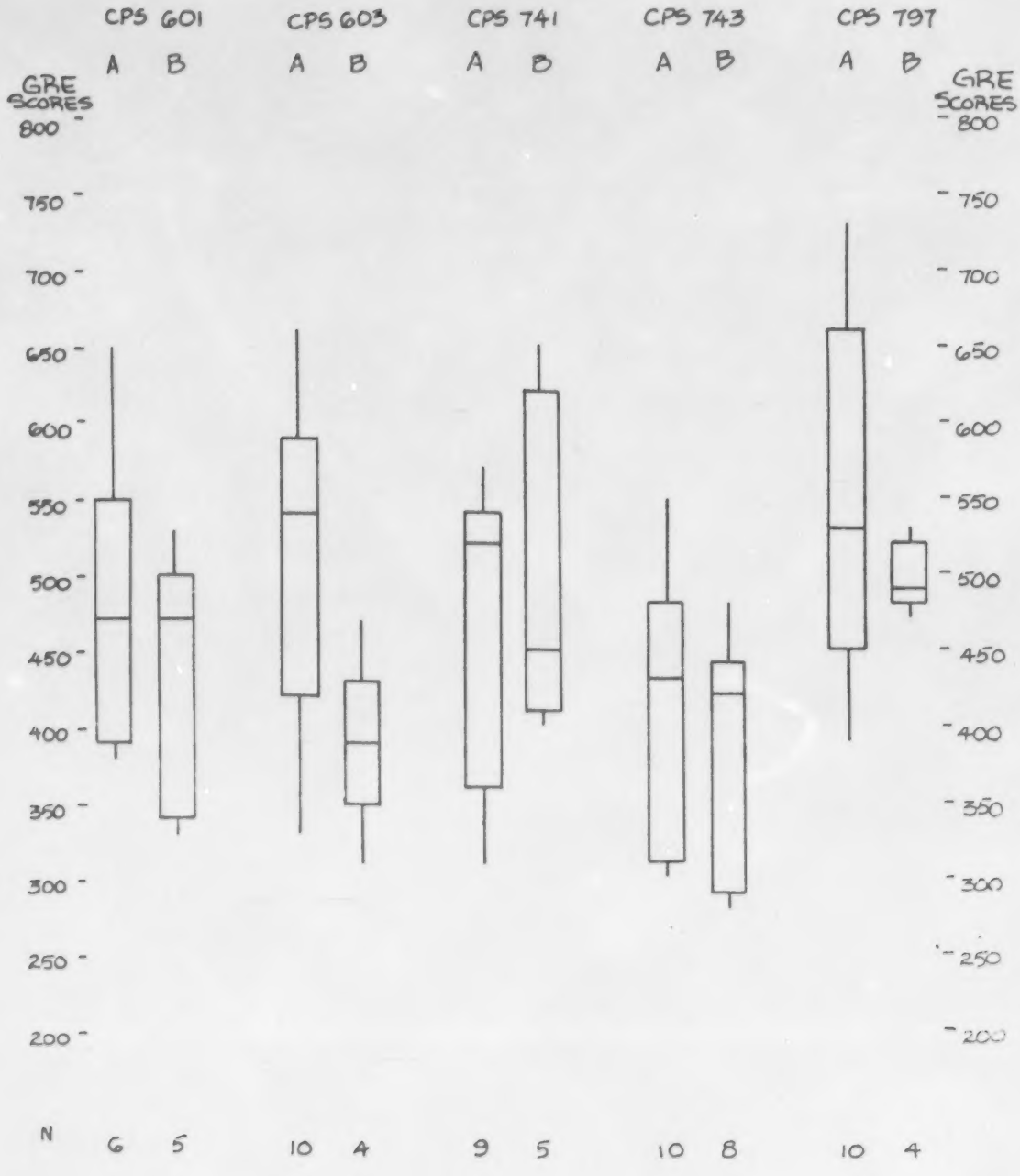


FIGURE 7-3
Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

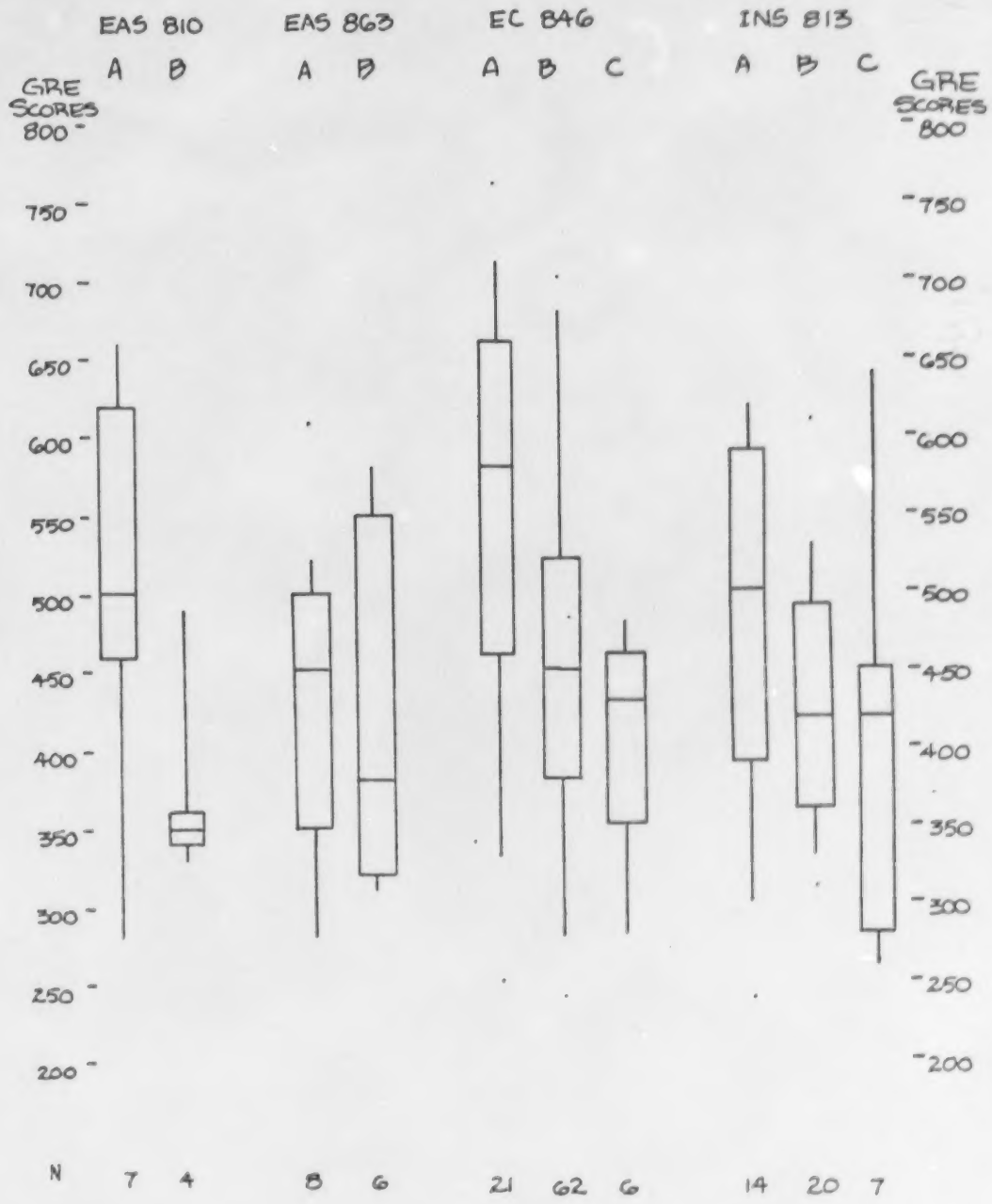


FIGURE 7-4

Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

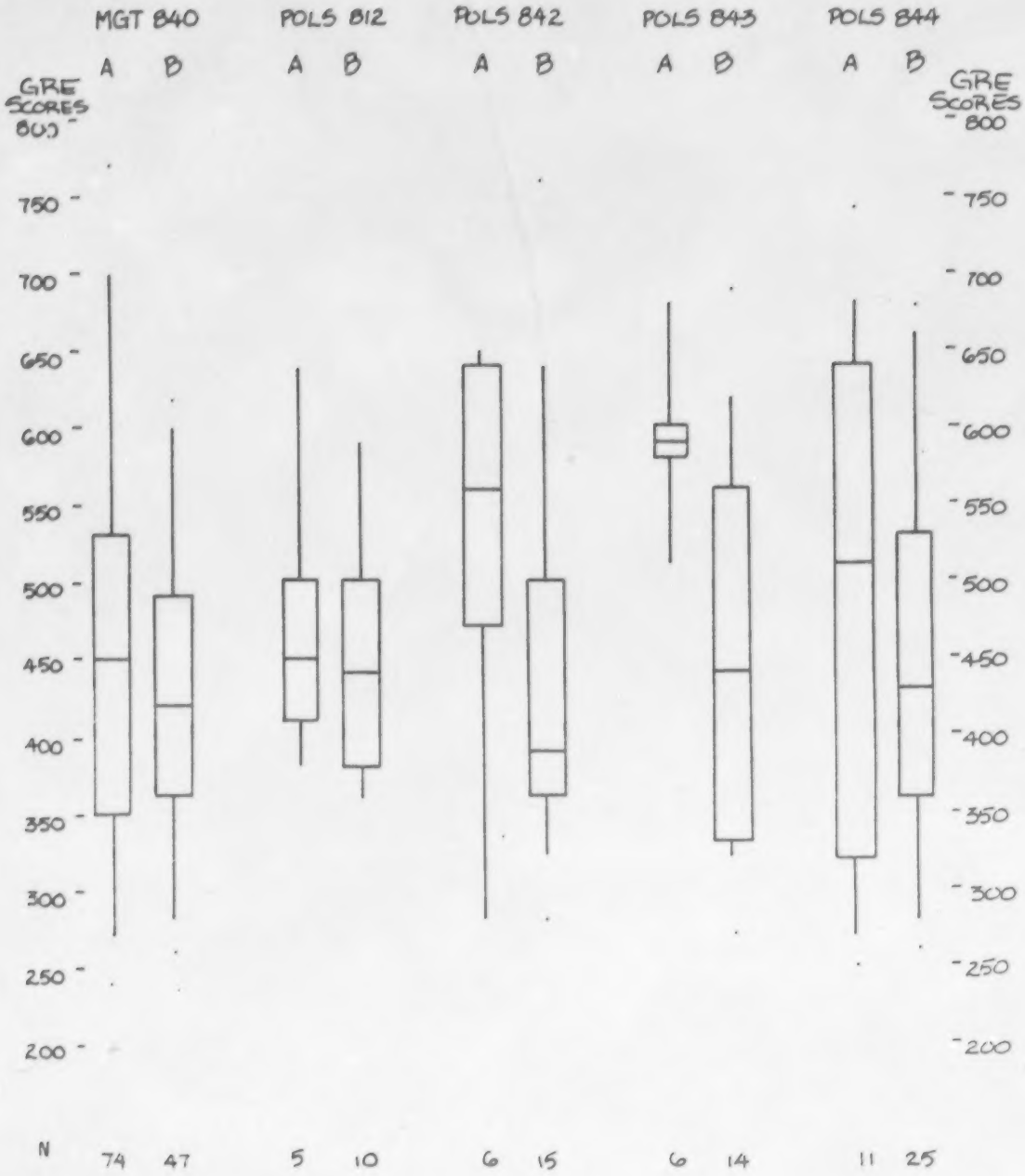


FIGURE 7-5
Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

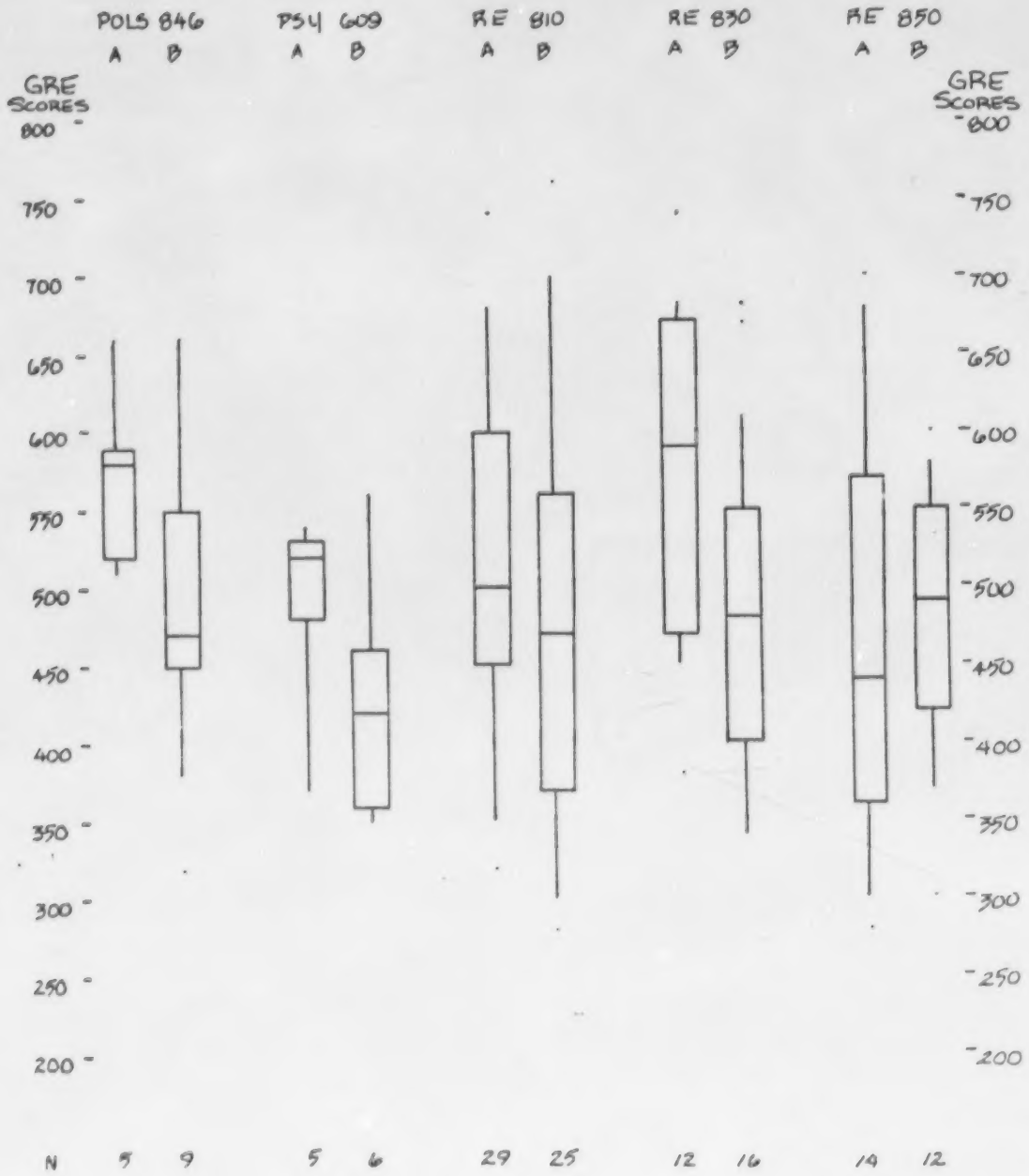


FIGURE 7-6
Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

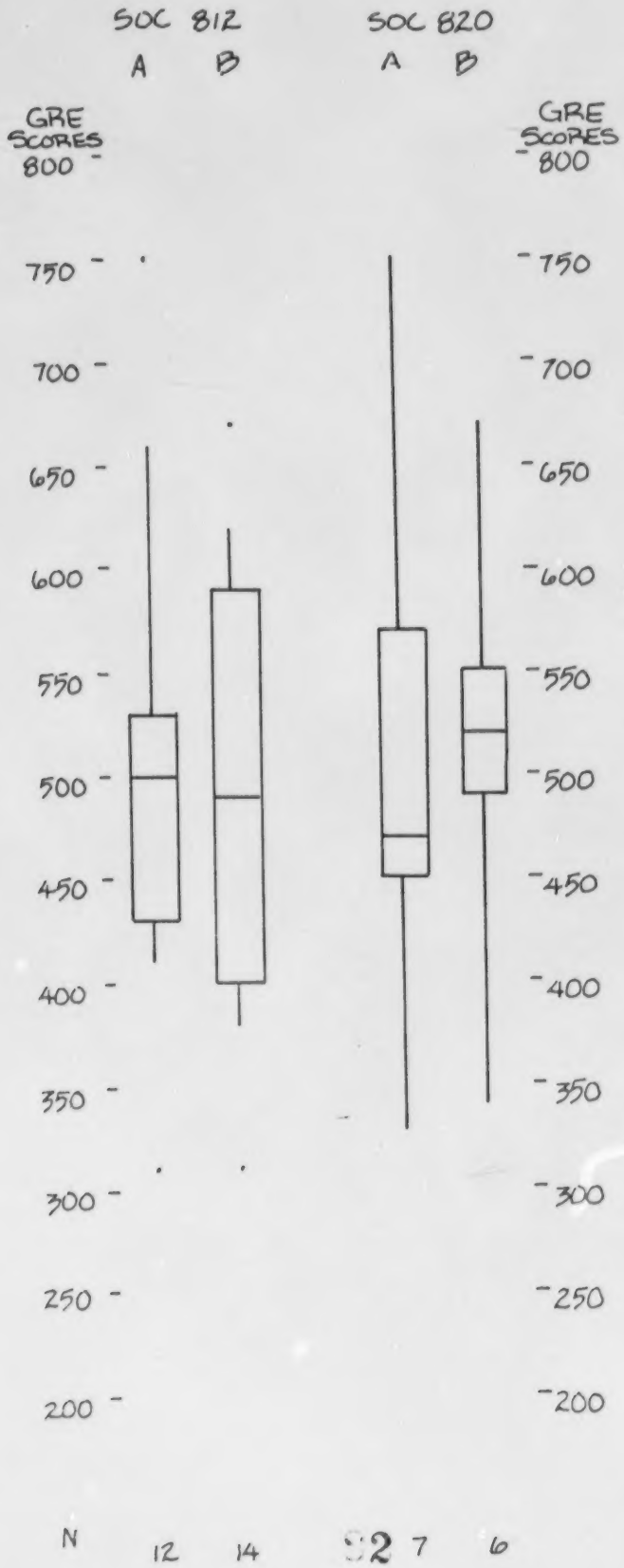


FIGURE 7-7

Distribution of GRE Verbal Scores by Grades in GSU Graduate Courses

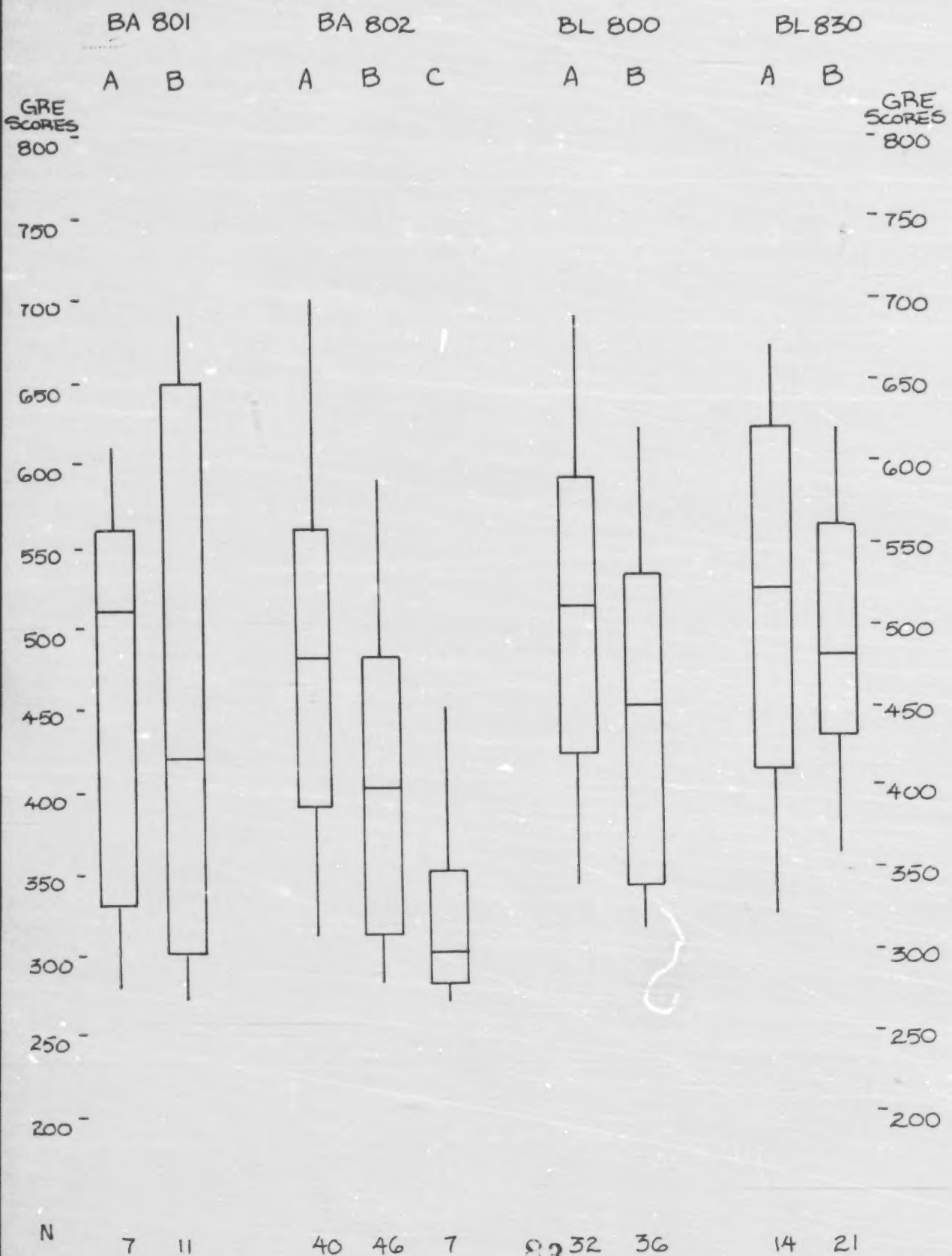


FIGURE 7-8

Distribution of GRE Quantitative Scores by Grades in GPU Graduate Courses

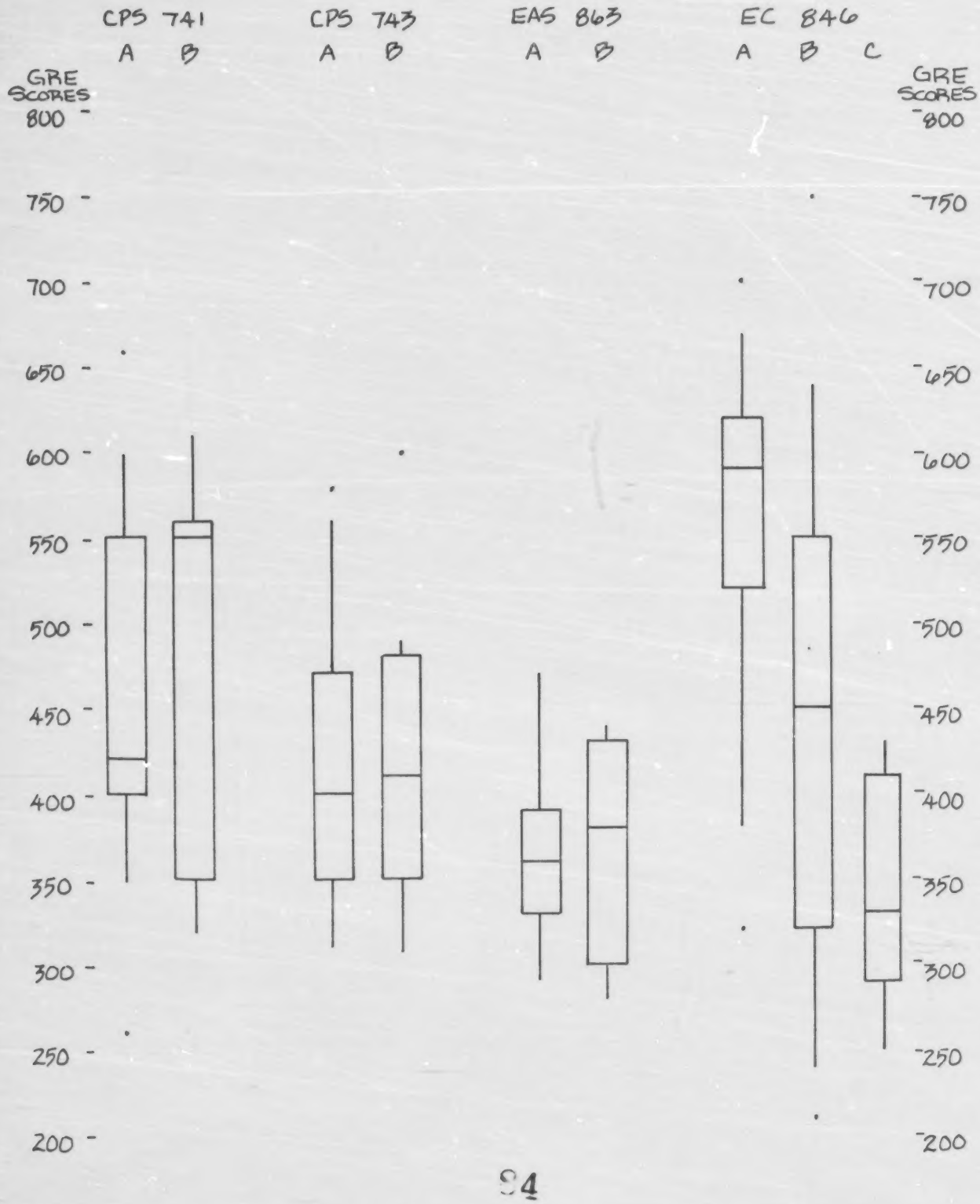


FIGURE 7-9

Distribution of GRE Quantitative Scores by Grades in GSU Graduate Courses

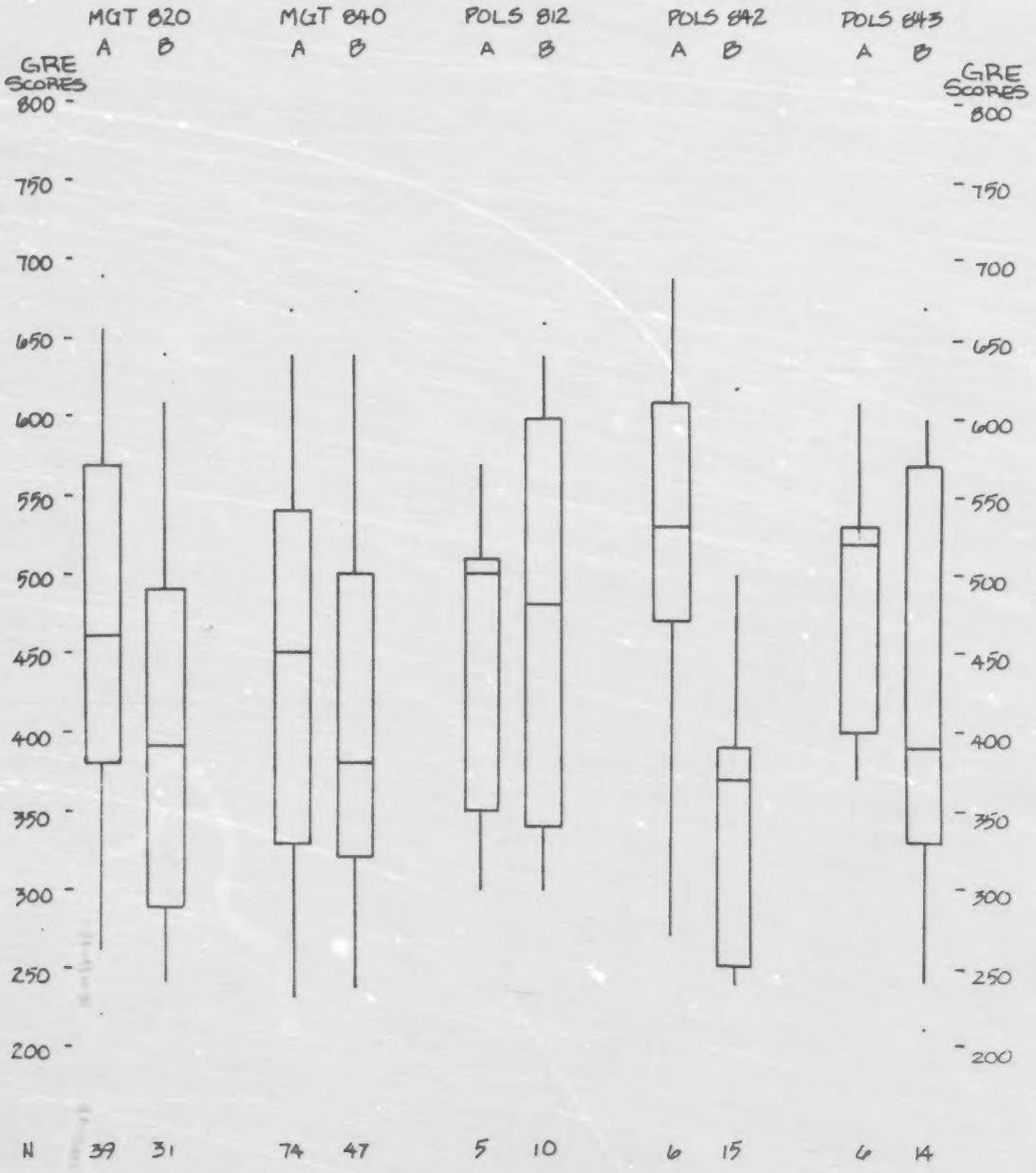


FIGURE 7-10

Distribution of GRE Quantitative Scores by Grades in GSU Graduate Courses

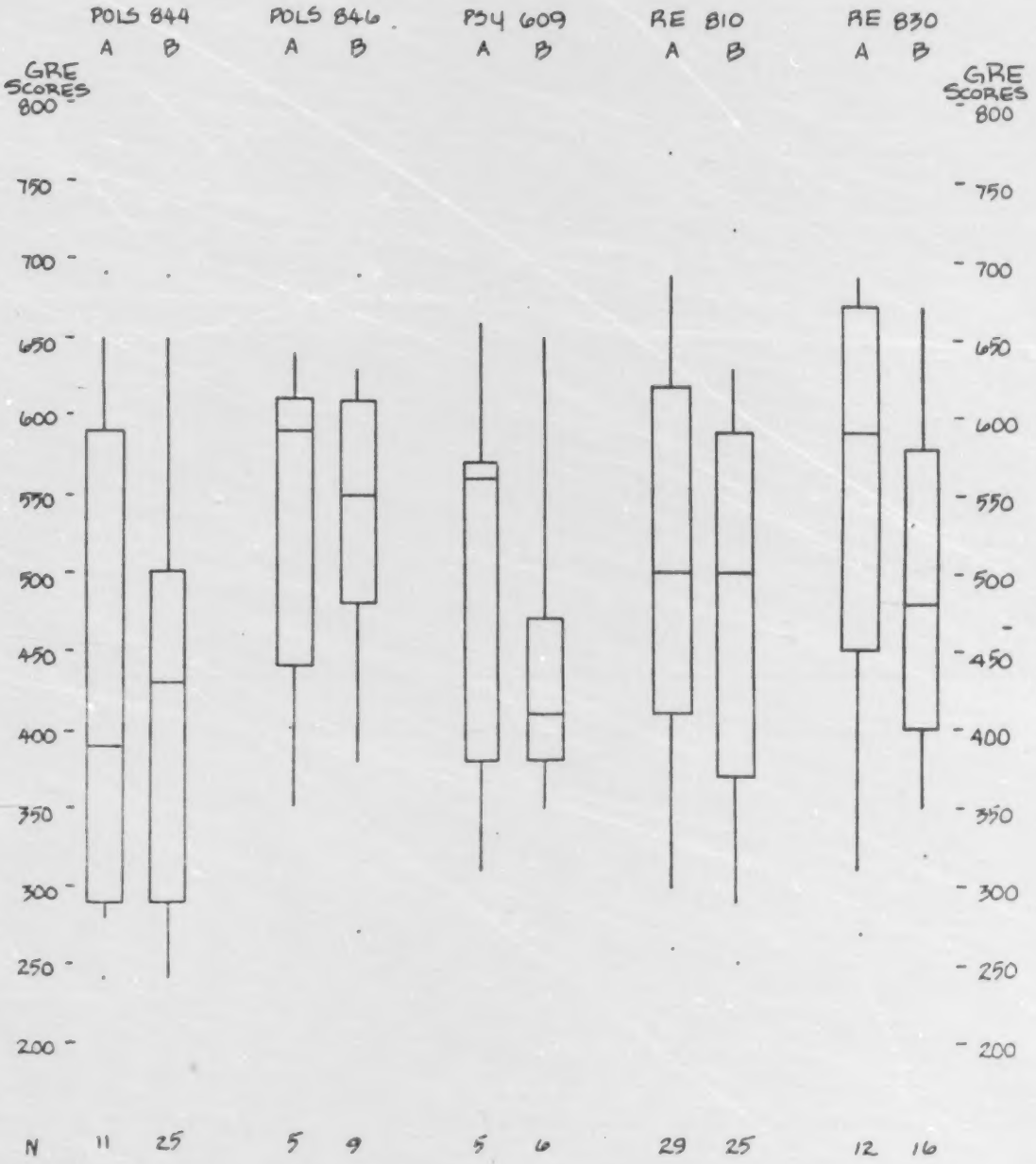
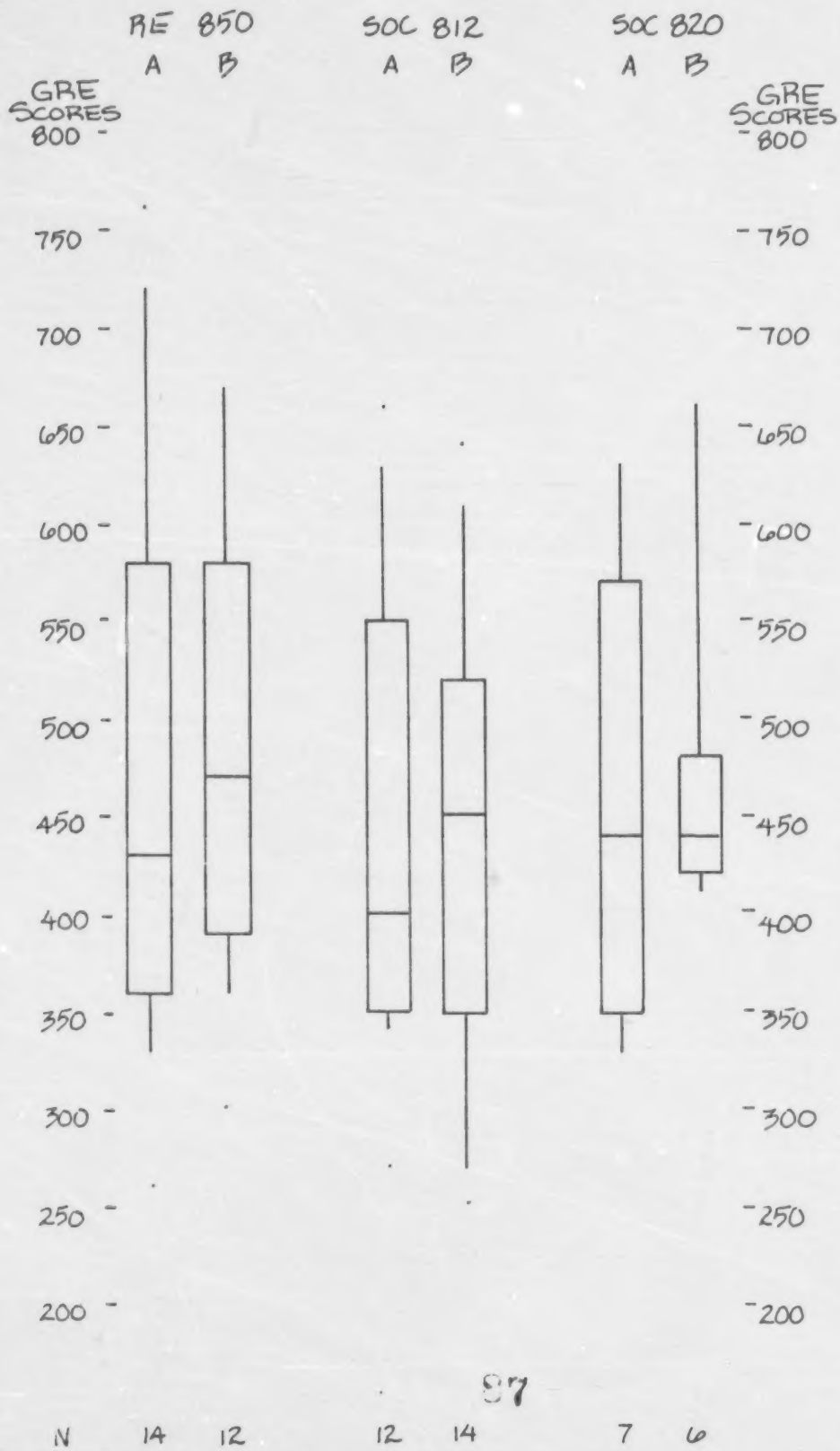


FIGURE 7-11

stribution of GRE Quantitative Scores by Grades in GSU Graduate Courses



## THE RELATIONSHIP OF GRE SCORES AND COURSE INSTRUCTOR

This section is an attempt to determine if the academic ability of students (as measured by the GRE) is systematically associated with the instructor that is chosen by students. This analysis includes only Urban Life graduate students for the period between 1969 and 1978. It should be noted that students' choice of courses is influenced by numerous factors other than the instructor. A summary of this section follows:

* For UL 810 (political science), instructor #19 had a group of students with unusually low GRE's a while instructor #48 had students with generally higher GRE-V (Figure 8-1).

* UL 820 (history) shows instructor #9 with low GRE-V while instructor #51 had higher median GRE-V (Figure 8-2).

* UL 830 (sociology) shows instructor #35 to have the lowest median GRE-V while instructor #47 has the highest (Figure 8-3).

* UL 840 (economics) has instructor #12 with the lowest median GRE-V (Figure 8-4).

* UL 805 has instructor #37 with slightly lower median GRE-V (Figure 8-5).

* UL 846 has instructor #52 with little lower median GRE-V (Figure 8-6).

* For UL 847 the highest median was for instructor #55 (Figure 8-6).

* UL 891 has one instructor (#44) with highest median GRE-V with instructor #55 has the lowest median (Figure 8-7).

* The Math 795 graph (Figure 8-8) shows that instructor #5 has the lowest median while instructor #32 has the lowest median in Math 796. The highest median goes for Math 796 with instructor #20.

FIGURE 8-1
Distribution of GRE Verbal Scores by U.L. 810 and Professor

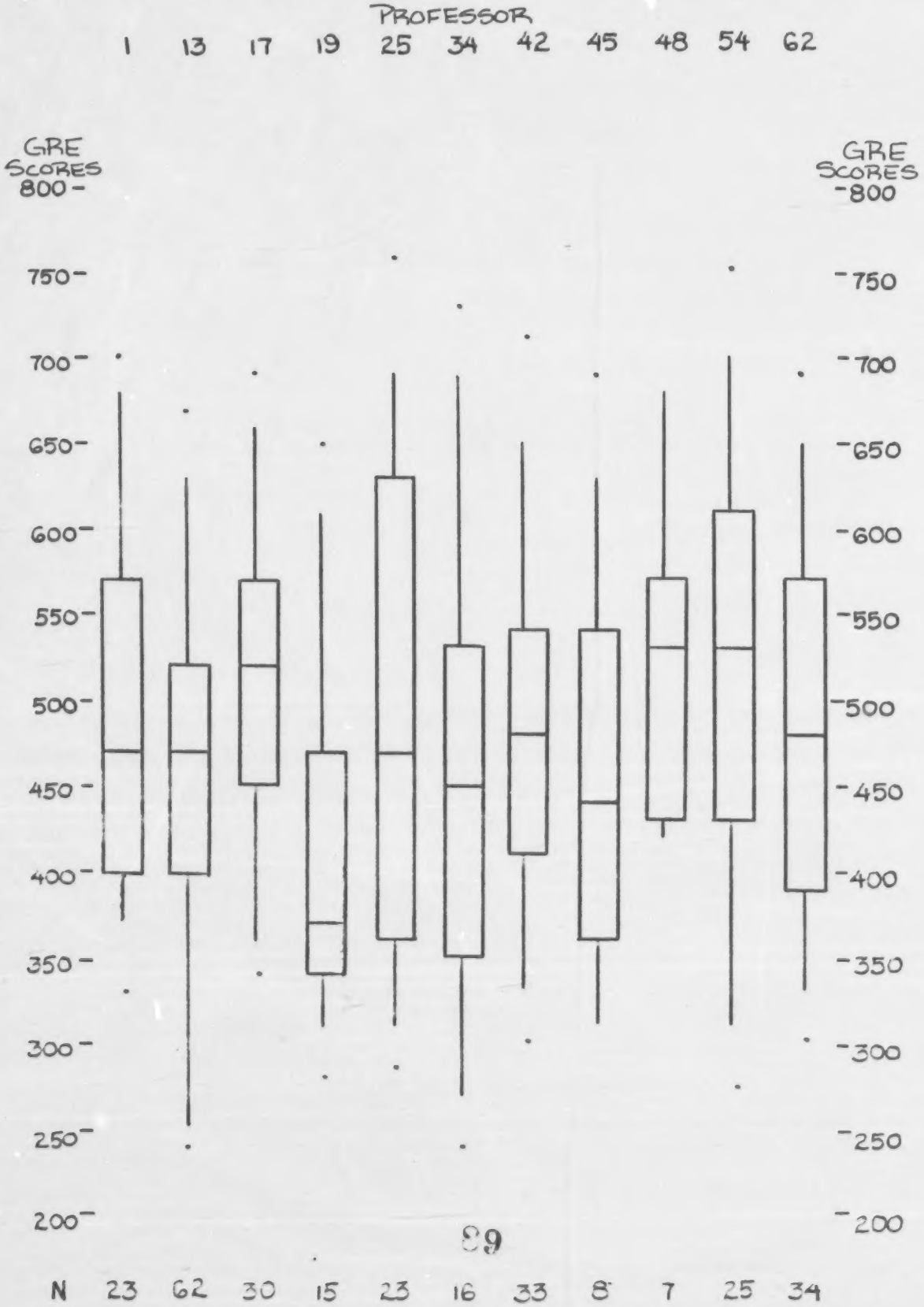


FIGURE 8-2
Distribution of GRE Verbal Scores by U.L. 820 and Professor

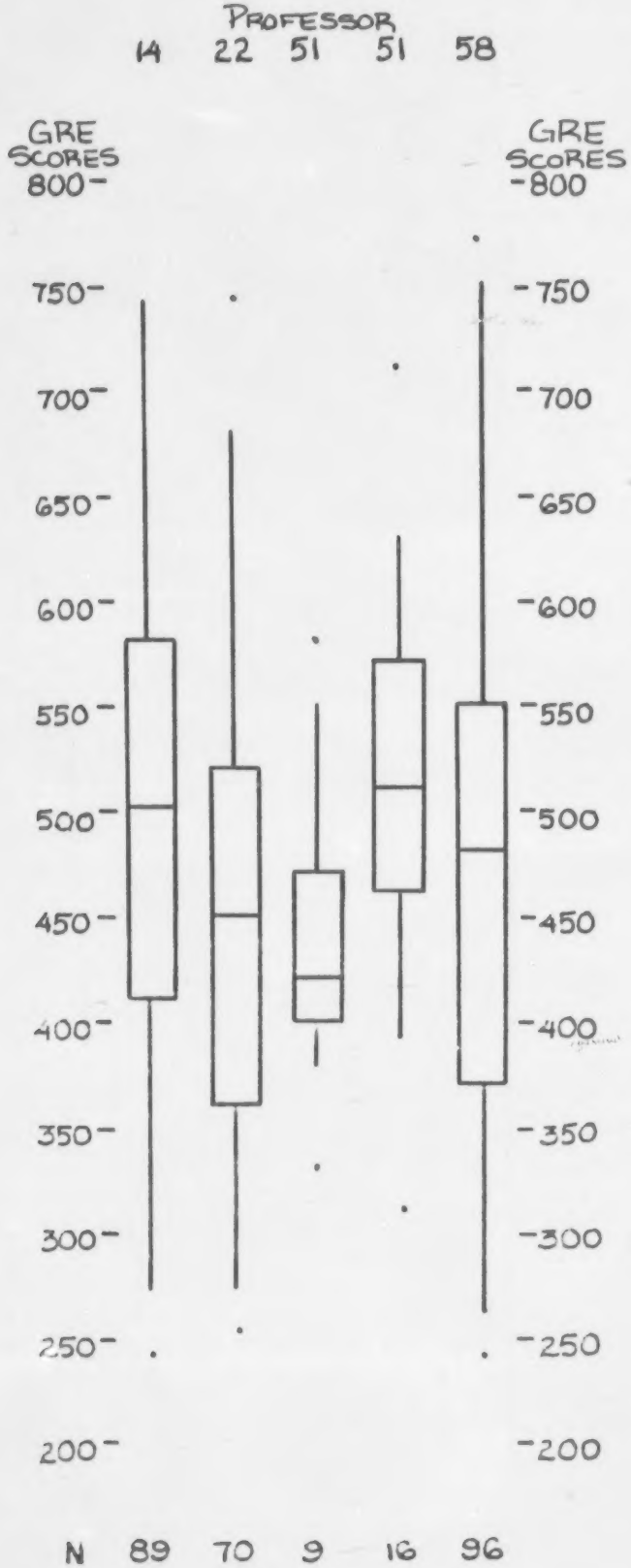


FIGURE 8-3
Distribution of GRE Verbal Scores by U.L. 830 and Professor

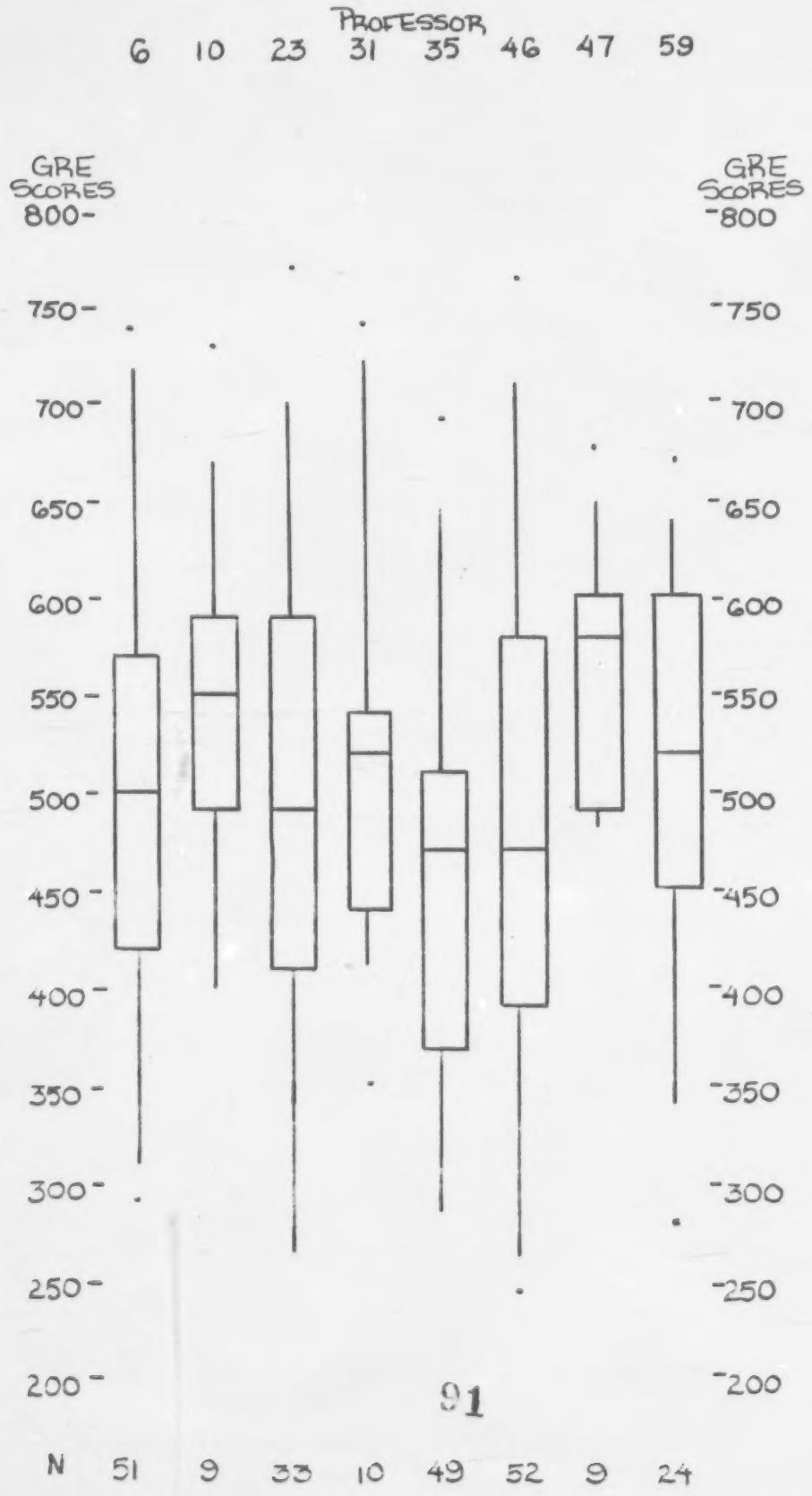


FIGURE 8-4

Distribution of GRE Verbal Scores by U.L. 840 and Professor

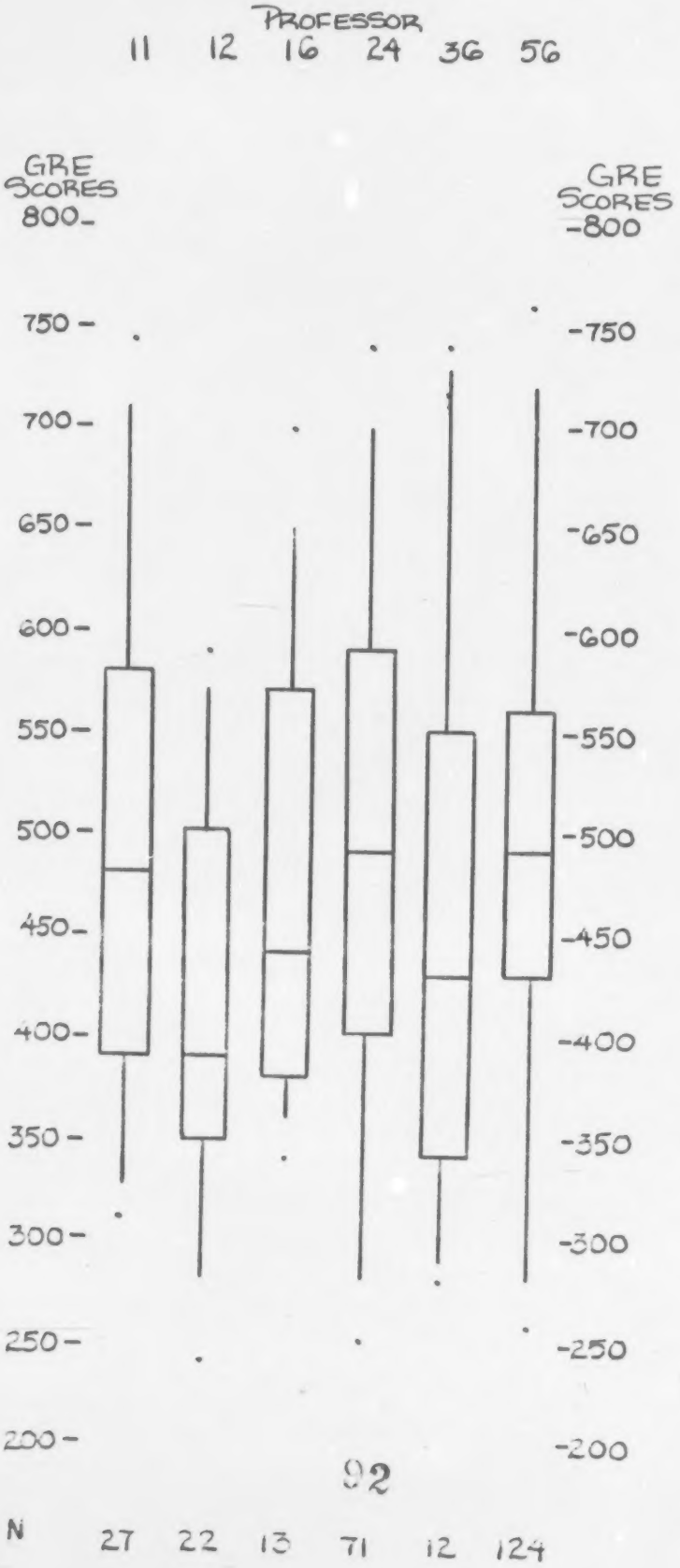


FIGURE 8-5
Distribution of GRE Verbal Scores by U.L. Graduate Course and Professor

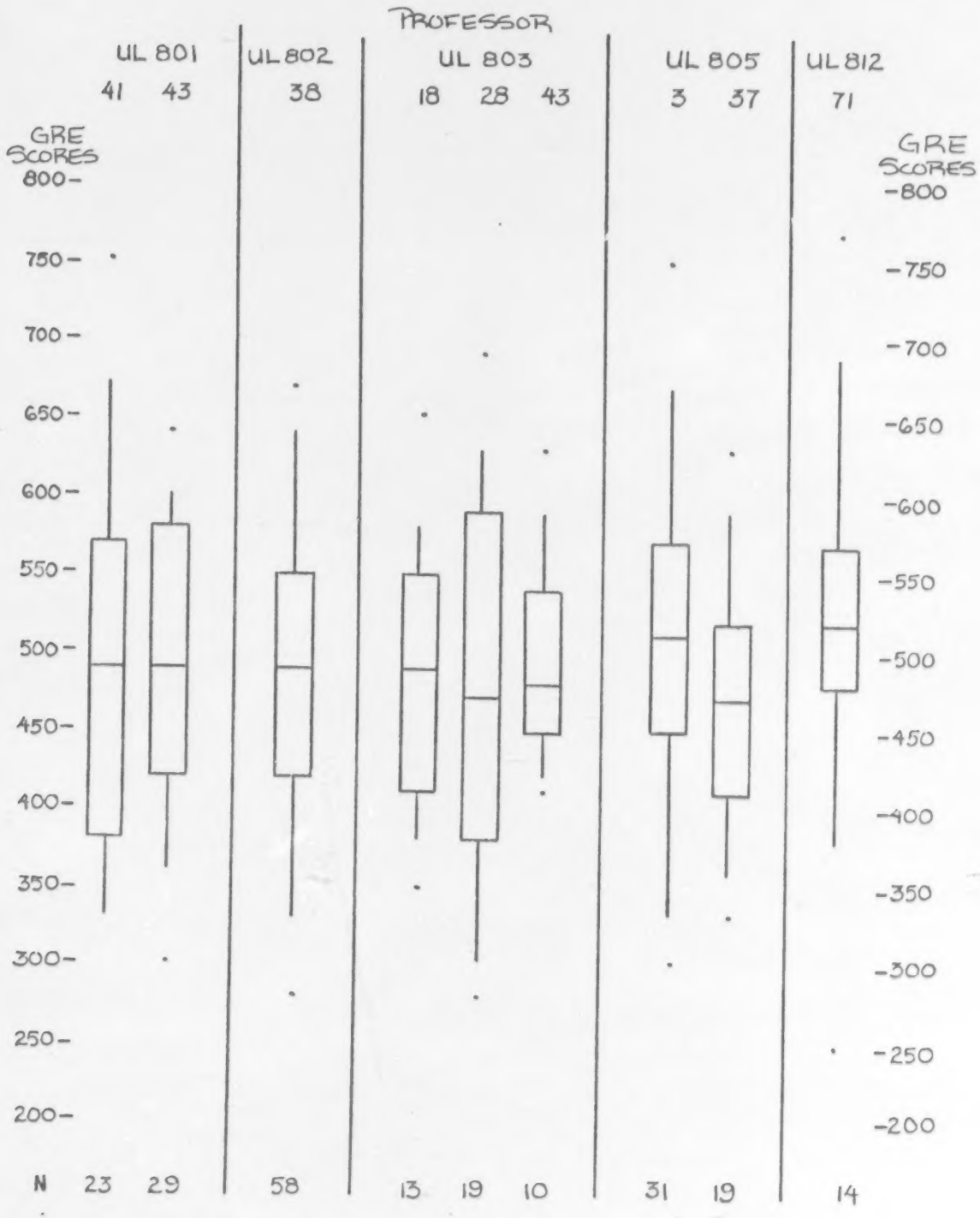


FIGURE 8-6
Distribution of GRE Verbal Scores by U.L. Graduate Course and Professor

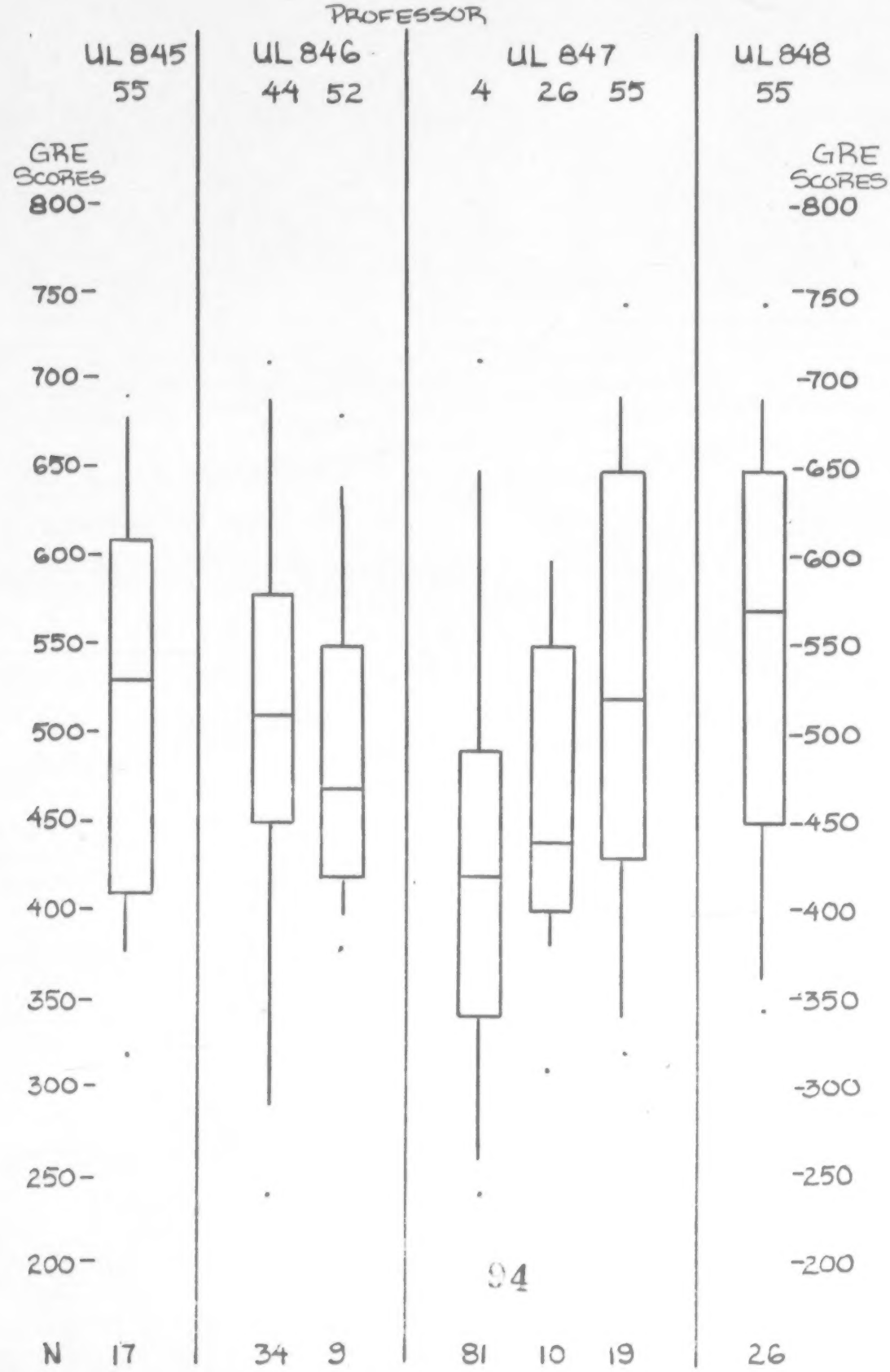


FIGURE 8-7

Distribution of GRE Verbal Scores by U.L. Graduate Course and Professor

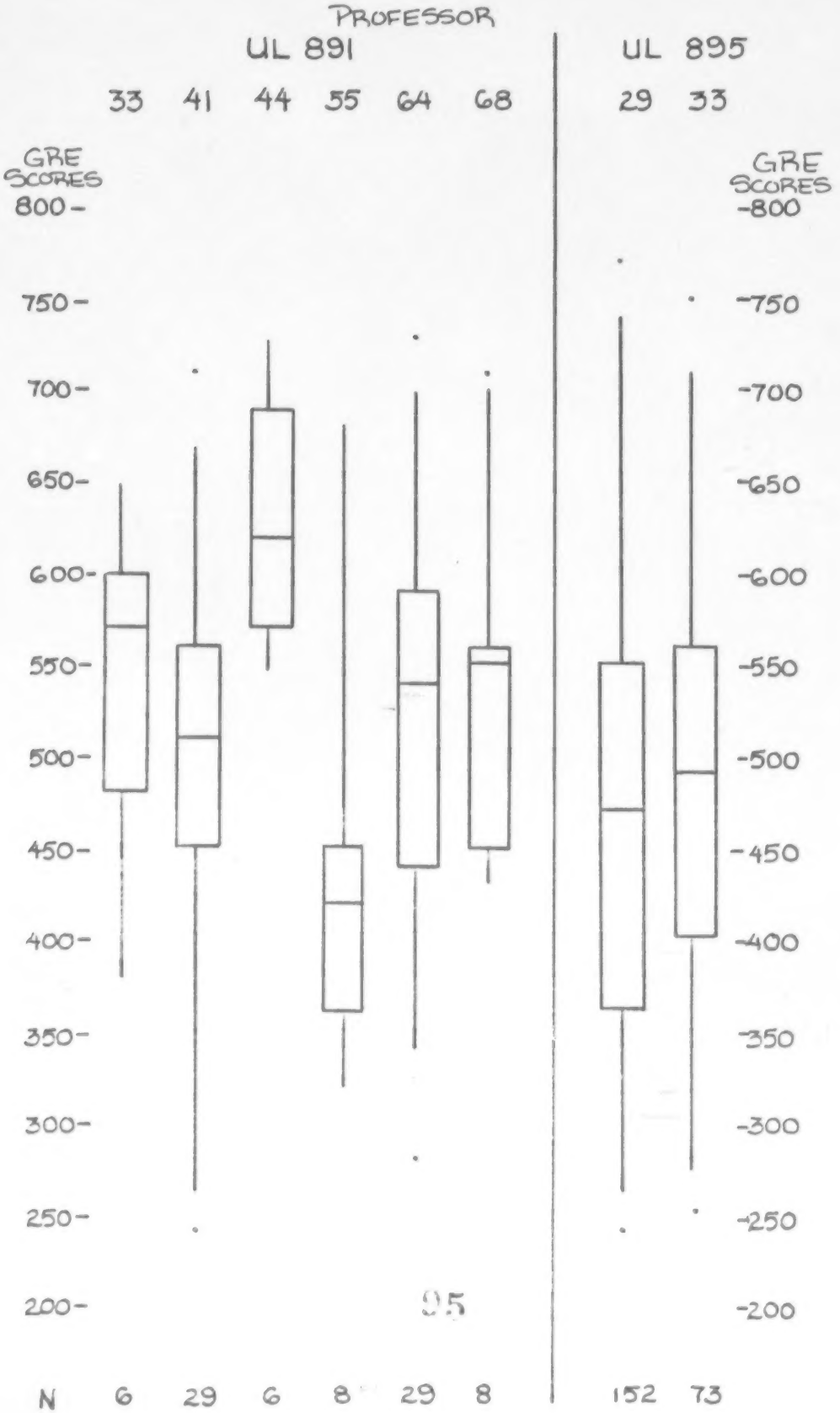
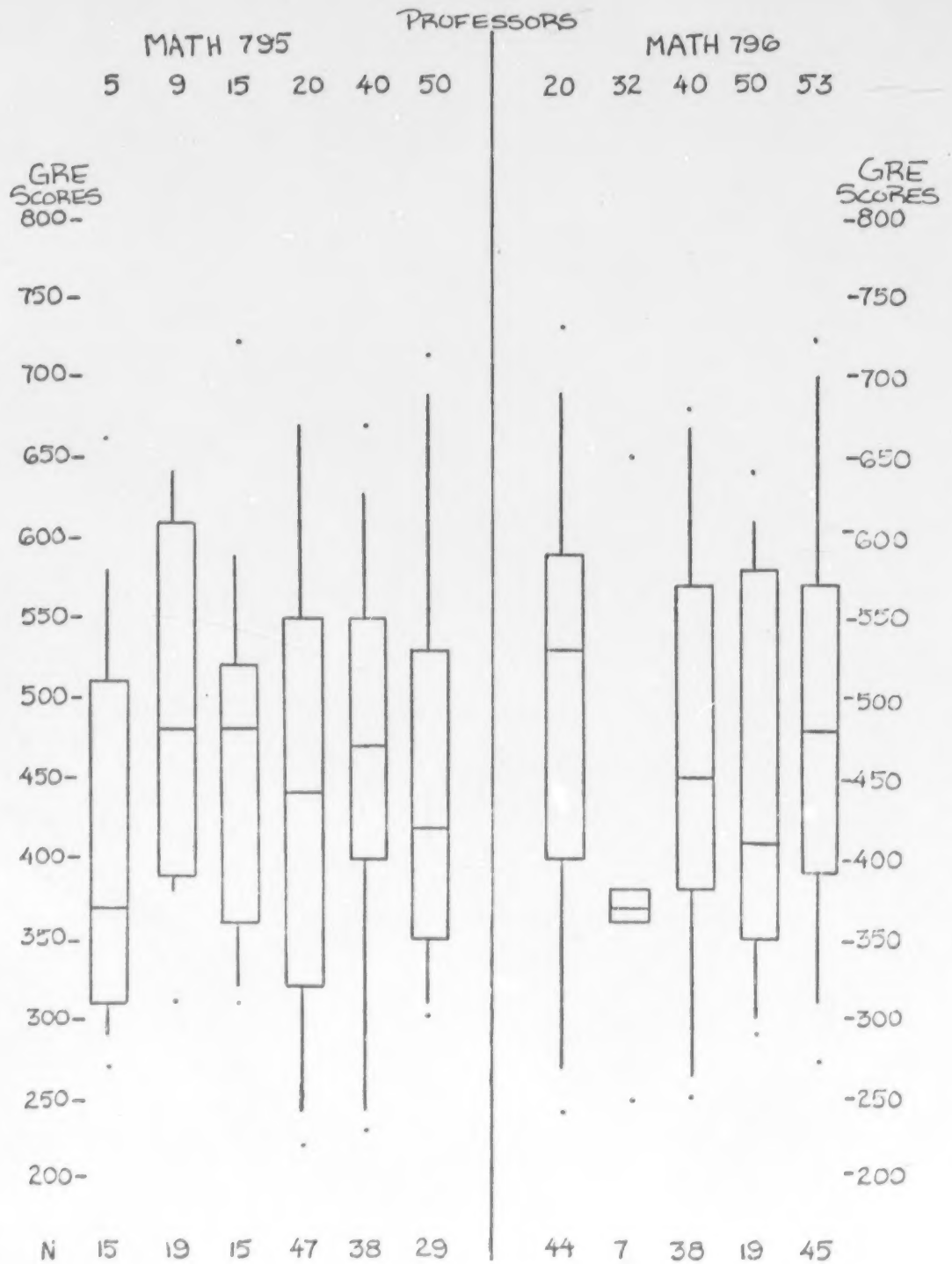


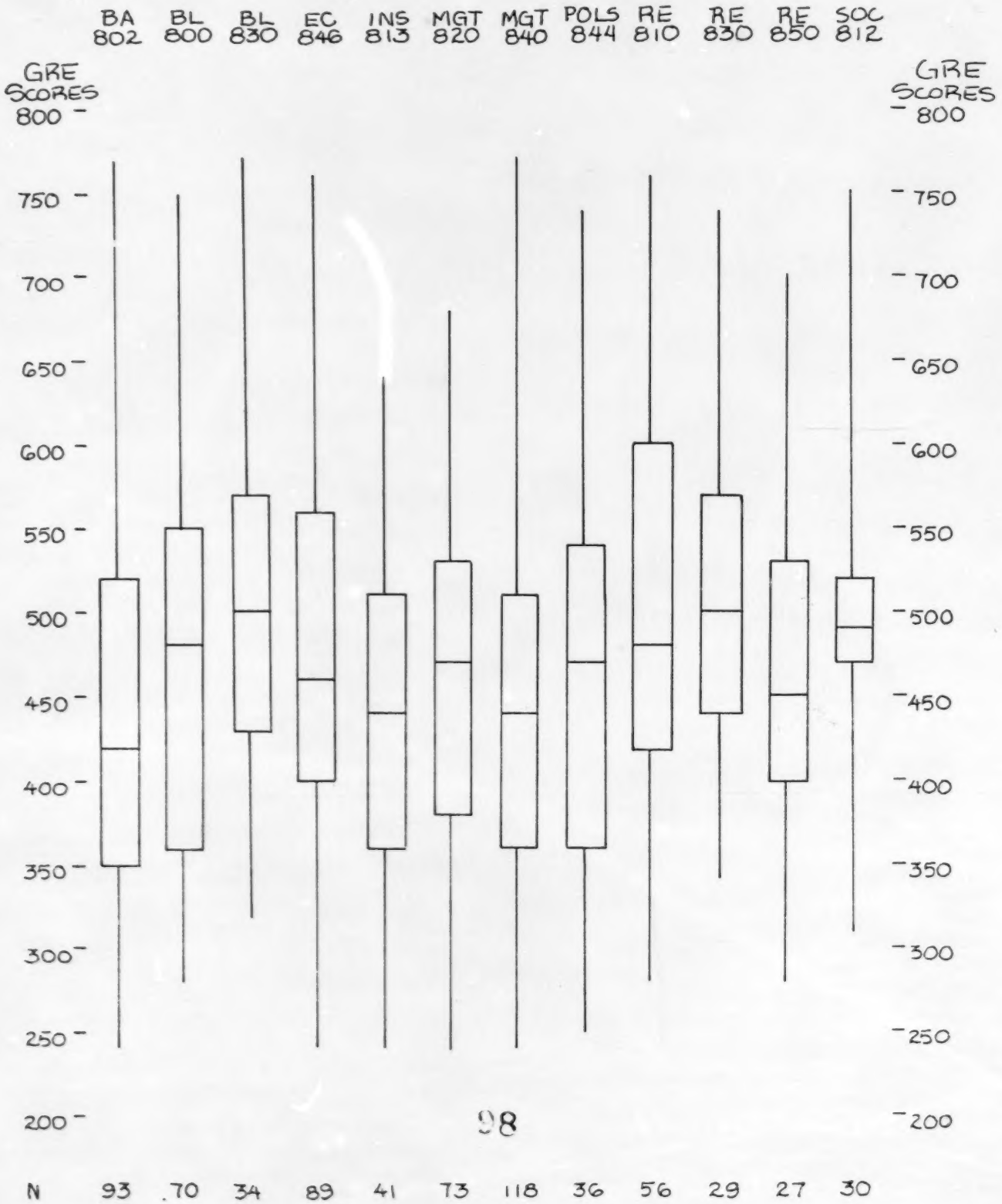
FIGURE 8-8
Distribution of GRE Quantitative Scores by Professors Teaching Math 795 and 796



## THE ASSOCIATION OF GRE SCORES WITH COURSE SELECTION

In this section, several courses that have frequent enrollment by Urban Life graduate students are compared with the distribution of GRE Verbal scores. The course with the highest median GRE-V is shown in Figure 9-1 to be BL 830, while the course with the lowest median is MGT 840.

FIGURE 9-1
Distribution of GRE Verbal Scores by GSU Graduate Courses



## SUMMARY AND CONCLUSIONS

The purpose of this research has been to examine a range of academic and background attributes of Master of Science in Urban Life degree program. The study population included over 750 graduate students active during the period of 1969 to Summer of 1978. The methods employed in this analysis were designed to probe a wide range of relationships and associations. Thus, the analysis resulted in a heterogeneous group of findings. The study included student personal characteristics along with academic indicators which were related to their academic performance. Special emphasis was placed upon the degree to which GRE scores were indicative of performance in the degree program.

Key findings of this analysis were:

1) Through the study period, each year's entering class has: a) increased the proportion of females; b) shown a slight downward trend in GRE scores; c) had higher undergraduate GPA's as a group; and d) manifested lower graduate GPA's in general.

2) The students who graduated attended a median of 8 quarters, while inactive and obsolete status students had a median of 3 quarters attendance. Those who were excluded from the program had a median of 2 quarters.

3) As a group, students who failed the core exam had markedly lower GRE scores.

4) Performance in core curriculum courses indicated a strong, consistent positive relationship between GRE scores and course final grades. In general, other U.L. courses showed a similar positive association.

5) An analysis of minority students' course grades and GRE scores also indicated a positive relationship between grades and scores.

6) Graduate courses taken in other GSU colleges showed a generally positive relationship between GRE scores and course grades with a few exceptions.

7) It appears that students' aptitude level as measured by GRE scores was often associated with their choice of course instructor. It was found that in some instances students who had completed a course with a given instructor had a median GRE score substantially higher (or lower) than the students completing the same course with another instructor.

REFERENCES

Blackborn, R., Armstrong, E., Conrad, C., Didham, J., and McKeene, T. Changing practices in undergraduate education, a report for the Carnegie Council on Policy Studies in Higher Education. Berkeley: The Carnegie Foundation for the Advancement of Teaching, 1976.

Borg, W. R. GRE aptitude scores as predictors of GPA for graduate students in education. Educational and Psychological Measurement, 1963, 23, 379-382.

Camp, J. and Clawson, T. The relationship between the graduate record examinations aptitude test and graduate grade point average in a master of arts in counseling program. Educational and Psychological Measurement, 1979, 39.

Dole, A. A. and Baggaley, A. R. Prediction of performance in a doctoral education program by the graduate record examinations and other measures. Educational and Psychological Measurement, 1979, 39.

Goldman, R. D. and Slaughter, R. E. Why college grade point average is difficult to predict. Journal of Educational Psychology, 1976, 68, 9-14.

Humphreys, L. G. and Taber, T. Postdiction study of the graduate record examination and eight semesters of college grades. Journal of Educational Measurement, 1973, Vol. 10, No. 3.

King, D. C. and Besco, R. O. The graduate record examination as a selection device for graduate research fellows. Educational and Psychological Measurement, 1960, 20, 853-858.

Law, A. The prediction of ratings of students in a doctoral training program. Educational and Psychological Measurement, 1960, 20, 847-851.

Lin, P. and Humphreys, L. G. Predictions of academic performance in graduate and professional school. Applied Psychological Measurement, 1977, Vol. 1, No. 2, 249-257.

Madaus, G. F. and Walsh, J. J. Departmental differentials in the predictive validity of the graduate record examination aptitude tests. Educational and Psychological Measurement, 1965, 25, 1105-1110.

McGill, Robert, Tukey, John W., and Larsen, Wayne A. Variations of Box Pots. The American Statistician, 1978, 32, 12-16.

Nagi, J. L. Predictive validity of the graduate record examination and the Miller analogies tests. Educational and Psychological Measurement, 1975, 35, 471-472.

Robertson, M. and Nielson, W. The graduate record examination and selection of students. American Psychologist, 1961, 16, 648-650.

Thacker, A. J. and Williams, R. E. The relationship of the graduate record examination to grade point average and success in graduate school. Educational and Psychological Measurement, 1974, 34, 939-944.

Tukey, J. W. Exploratory Data Analysis. Reading, Massachusetts: Addison-Wesley, 1977.

Williams, J. D., Harlow, S. D. and Gab, D. A longitudinal study examining prediction of doctoral success: grade point average as criterion, or graduation vs. non-graduation as criterion. Journal of Educational Research, 1970, 64, 161-164.